

**Ministry of Economic Development  
Democratic Socialist Republic of Sri Lanka**

**Democratic Socialist Republic of Sri Lanka**

**The Project for Development Planning  
for the Rapid Promotion of Reconstruction  
and Development in Jaffna District**

**Final Report**

**November 2011**

**Japan International Cooperation Agency (JICA)**

**IC Net Limited  
Oriental Consultants Co., Ltd.**

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## **PREFACE**

In response to the request from the Government of the Democratic Socialist Republic of Sri Lanka, the Government of Japan decided to conduct the Project for Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District and entrusted the project to the Japan International Cooperation Agency (JICA).

JICA dispatched a consultant team to implement this project headed by Mr. Hiroaki Yonesaka of IC-NET Limited and consist of IC-NET Limited and Oriental Consultants Co., Ltd. to Sri Lanka, between March 2010 and November 2011.

The project formulated the road maps in order to envisage the reconstruction and development in Jaffna district toward 2020 after the end of conflict in 2009. The road maps consist three sectors of agriculture, fishery and community development which are assumed as the main pillars for recovering Jaffna economy. In addition, the project conducted pilot projects with the officials concerned of the Government of Sri Lanka and various community groups of Jaffna people. Achievement and experiences are compiled as the lesson learned and reflected the necessary arrangement for the realization of the road map. Upon the completion of the pilot projects, this final report prepared to recommend the measures of Jaffna's economy development

I hope that this report will contribute to the promotion of the steady reconstruction and development in Jaffna district and to the enhancement of friendly relationship between our two countries.

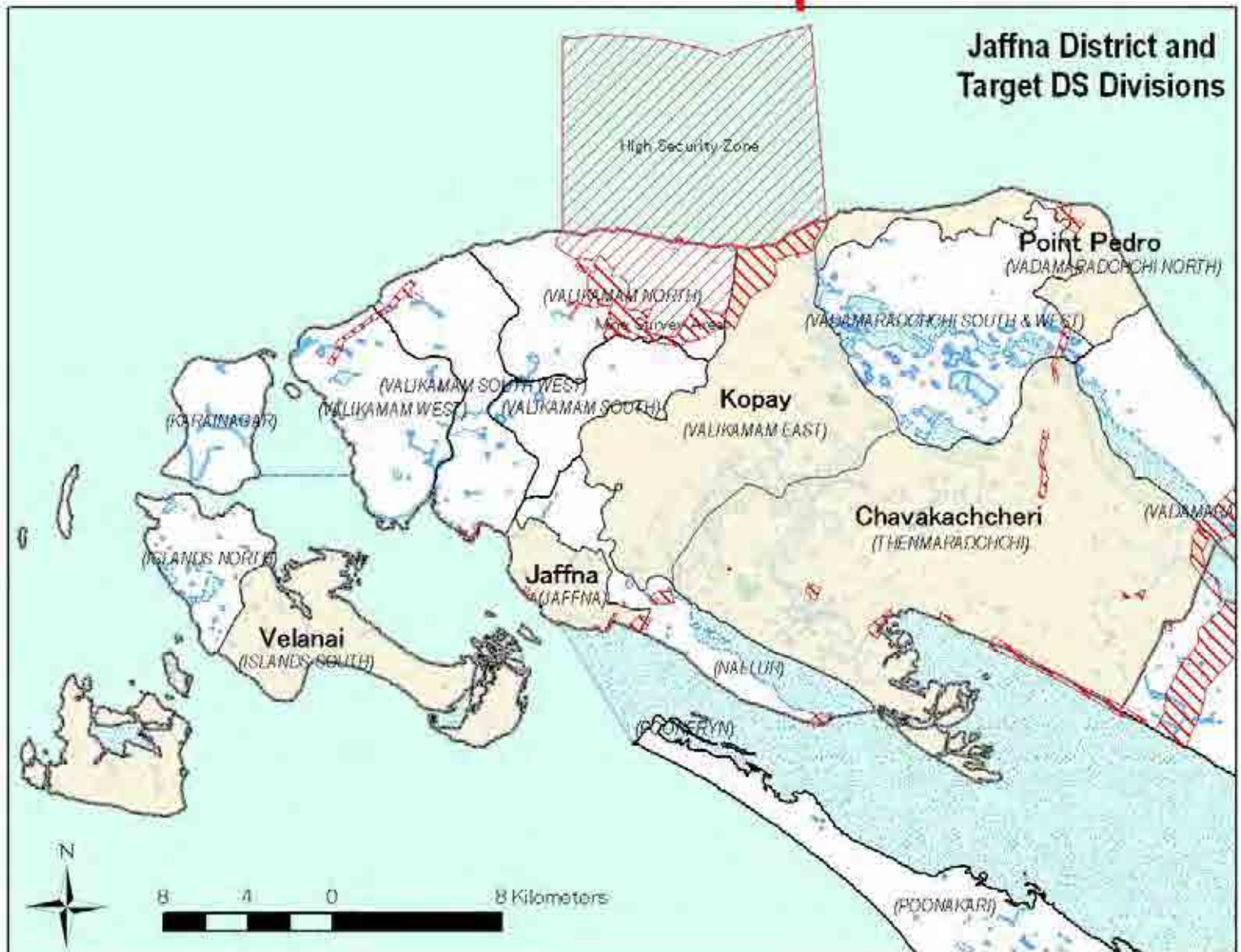
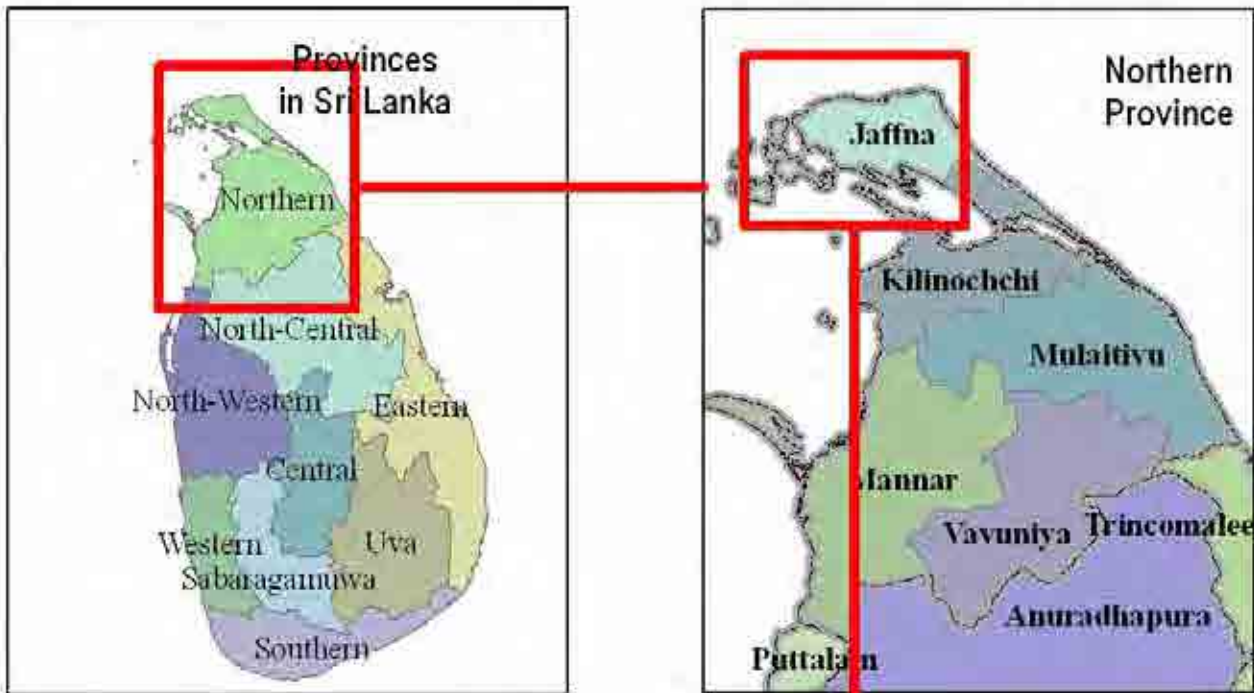
Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Sri Lanka for their close cooperation extended to the project.

November 2011,

Kiyofumi KONISHI  
Director General  
Economic Infrastructure Department  
Japan International Cooperation Agency

The Project for Development Planning for the Rapid Promotion  
Of Reconstruction and Development in Jaffna District

## Location Map of the Project





# Map of the Project Sites of PDP Jaffna

- ### Legend
- Jaffna District
  - Target Five DS Divisions
  - Rehabilitated Tanks by QIPP
  - Rehabilitated Jetties by QIPP
  - Agriculture Pilot Project
  - Fisheries Pilot Project
  - Community Pilot Project

- High Security Zone
- Mine Survey Area



**JAFFNA DISTRICT**

AC-1 Seed Coop  
AC-2 Agriculture Extn.  
AC-4 Mushroom  
Thirunelvely, Nallur

Sangaththakerni Kulam  
Velanai South  
Velanai

CC-1 WRDS Business Development (Coir Product)  
Velanai East Velanai

FC-5 Fish Auction Hall  
Pungudutivu Center, Velanai

FC-2 Sea Weed Farming  
Pungudutivu East, Velanai

FC-3 Sea Cucumber Farming  
FC-5 Fish Auction Hall  
Mandaitivu, Velanai

CC-3 WRDS Business Promotion (Mushroom)  
Aththiyadi, Jaffna

FC-5 Fish Auction Hall  
Maravanpulo  
Chavakachcheri

AC-3 Mango Growers Society,  
Chavakachcheri

FC-5 Fish Auction Hall  
Kachchai, Chavakachcheri

Uppuruvil Kulam  
Madduvil Centre

CC-4 WRDS Business Development (Poultry),  
Siruppidy

Vannan Kulam,  
Vellampokkaddi

Varakaipirai Kulam  
Puttur East

CC-2 WRDS Food Processing  
Puloli South, Point Pedro

FC-5 Fish Auction Hall  
FC-4 Introduction of FAD  
Katkovalam, Point Pedro

AC-6 LIBCO Milk processing  
Point Pedro

CC-5 Widow's Society Support,  
Chavatkaddu,  
Sandilipay

AC-5 Coconut Nursery  
Atchchuveli, Kopay

Uchchalai Kulam  
Ilvalai North, Tellippalai

Vellavarayan Kulam  
Sulipuram, Chankanai



(DELET)

(KARACH)



# The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District

## Photographs



Road Construction



Sangupity Bridge between Jaffna and Killinochchi



Inoperative Cement Factory in KKS



Open Dumping Site



1<sup>st</sup> Workshop for Development in Jaffna District  
held on 19<sup>th</sup> Feb. 2011



2<sup>nd</sup> Workshop for Development in Jaffna District  
(Fisheries Sector) held on 15<sup>th</sup> Jul. 2011

# The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District

## Photographs



Tank Renovation (Before)



Tank Renovation (After)



Jetty Renovation (Before)



Jetty Renovation (After)



AC-5 IRC Coconut Nursery



FC-6 IRC Fishery College



# The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District

## Photographs



AC-1 Seed processing facility of SEEDCO  
Thilnelvely, Nallur



AC-2 Farmers training at DATC  
Thilnelvely, Nallur



AC-3 Mango awareness program - Pruning  
demonstration - at Chavakachcheri



AC-4 Mushroom spawn production laboratory  
at DATC, Thilnelvely, Nallur



AC-5 Handing over agri-machineries to  
CCB's coconut nursery at Achchuveveli, Kopay



AC-6 Milk processing facility of LIBCO  
at Point Pedro



# The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District

## Photographs



FC-1 Workshop in FCS Unions Federation Level at FCS Union Federation Ltd,-Jaffna



FC-2 Making Rope for Seaweed Farming by Community Women for Seaweed farming at Pungudutivu, Velnai DS Division



FC-3 Installation of pen for sea cucumber at Navanthurai



FC-4 Demonstration of FAD in Katkovalam, Point Pedro



FC-5 Capacity Building Training for Katkovalam FCS



FC-6 Trainers of Training programme at Ocean University (National Institute of Fisheries and Nautical Engineering) Colombo



# The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District

## Photographs



CC-1 Palmyrah craft making  
at Velanai WRDS, Velanai



CC-1 New WRDS Building  
at Velanai WRDS, Velanai



CC-2 Women involved in palmyrah jaggery making  
at Singanagar WRDS, Point Pedro



CC-3 Technical Training on Mushroom Production  
for Aththiyadi WRDS members



CC-4 Vaccination by Volunteer Vaccinator  
at Thavalai Iyattalai WRDS, Chavakachcheri



CC-5 Capacity building training  
for Widows' society Members, Chavatkadu

## **Abstract**

### **Chapter 1 Introduction**

This Final Report contains nine chapters. Chapter 1 describes the fundamentals of this Project (or PDP Jaffna). The following presents main points discussed in Chapter 1.

After discussing the background of the Project, the two-fold objectives of the Project are stipulated. The first is to assist the district people in rebuilding socio-economic activities by formulating a regional development plan and Road Maps and implementing the Quick Impact Pilot Project (QIPP) and the Pilot Projects. The second is to indicate a way to reconstruct the regional economy by, among other things, strengthening various Community Based Organizations (CBOs) such as Farmer's Organization (FO), Fishermen's Cooperative Society (FCS) and women's organization. After the first assignment of the Project Team in April 2010, the Team has been implementing PDP Jaffna along the schedule indicated on page 1-3 in Chapter 1.

Project area is identical to Jaffna District, which is located a northernmost tip of the country and belongs to the dry zone climatically. The district is a part of Northern Province and has 15 Divisional Secretariat (DS) Divisions. The local population is predominantly Sri Lankan Tamils.

Unlike Sri Lanka's overall economy which drastically changed from an agrarian economy in 1950 to its current sector composition led by the service sector, the economy of Jaffna has been forced by the internal conflict to remain largely dependent on the primary industries. The on-going recovery of the local economy is resulted partly from new investment in commerce and finance sectors from Colombo capitals and donors but largely from new markets opened for local crops and fish after the A9 road opened.

Chapter 1 also provides basic information of this Final Report, starting from a conceptual framework for development planning and focused sectors to the significance of the Pilot Projects and the QIPP.

### **Chapter 2 Overview of Jaffna**

Chapter 2 describes the present situation of Jaffna District. The following is the summary of the chapter:

#### (1) Natural Geography

- Jaffna Peninsula is located in the northernmost region of Sri Lanka and is separated from India by the Palk Strait. Jaffna District consists of this peninsula and seven inhabited islands, being connected to the mainland Sri Lanka by a narrow strip of land called Elephant Pass.
- Jaffna is located in the dry zone; the district recorded in 2009, only 59 annual rainy days, being the least among 20 major cities in Sri Lanka. The maximum precipitation occurs from October to December during the northeast Monsoon although some showers are observed from April to May.



## (2) History

- Jaffna has a history of more than 2000 years of inhabitation and has been the cultural, spiritual and economic center of Sri Lankan Tamils. The majority of Sri Lankan Tamils, including those who are very successful in their career or in business in Colombo or abroad, consider that their origin is Jaffna.
- Just before the resumption of the conflict in 1990, Liberation Tigers of Tamil Ealam (LTTE) had controlled Jaffna Peninsula until 1995 when the city was retaken by government forces. However, even after 1995, the city had suffered isolation, the lack of security and some influence from LTTE. The conflict finally ended in 2009.

## (3) Population

- The population of the district was more than 738,000 in the 1980s, but it declined due to the flight of people during the conflict. The total population was 625,761, in April 2010. Yet, this is larger than the combined total populations of the four other districts in Northern Province.
- In Jaffna District, the total number of IDPs was 45,275 while 64,144 individuals returned their homeland as of June 2011. There are several types of IDPs/returnees reflecting different periods of displacement. There was the rapid increase of resettlement since September 2010, especially for old IDPs because of the release of High Security Zones (HSZ) and the accelerated demining operations. Their issues are resettlement or housing, poor livelihood measures, and the mental and physical disorders caused from the prolonged conflict.

## (4) Economy

- Sri Lanka's gross domestic products (GDP) grew robustly by 8% in 2010 from a low growth of 3.5% in 2009 resulted from the global economic crisis. Sri Lanka is now at the lower level of the middle-income countries with a per capita GDP of USD 2,399 in 2010. Sri Lanka's poverty rate, which accounted for 15.2% of the population in 2006, declined to 7.6% in 2010.
- It is also a sobering fact in Sri Lanka that considerable regional economic disparities exist among the nine provinces. Northern Province is the least developed; it holds 5.8% of the total Sri Lankan population but contributes only 3.3% of the GDP.
- The economic growth of Northern Province in 2010 is estimated to amount to 15%. The growth in Jaffna District must be no less than 15%. Jaffna's main economic sectors (agriculture, fisheries, and construction) made a jump start and are sustaining growth since the end of the fighting. Despite the backwardness and poverty that still prevail in the district, economic benefits from the new markets are trickling down to the grassroots level.
- Prior to the conflict, Jaffna contained many small-scale industries that manufactured household items or processed food. However, most of the owners of these businesses have left or closed the shops during the conflict. A recent United Nations Industrial Development Organization (UNIDO) fact finding mission for the manufacturing in Jaffna proposed that development of manufacturing in the district should be pursued along support to agriculture and fishery such as commercial rice mills, ice and freezing plants, and the boat and engine repairing workshops.
- In the post-conflict Sri Lanka, tourists from overseas significantly increased by 46% to 654,476 persons in 2010, and it will likely register further increase by 40% in 2011. Tourism has also suddenly become a key service industry in Jaffna after 2009 though tourists to Jaffna are predominantly Sri

Lankans. However, tourism in Jaffna does not have a sound industrial basis; service quality is sometimes questionable and the effective government supervision is absent.

(5) Government Administration

- The government administration works at five levels: central, provincial, district, DS Division and GN Division/local authorities such as municipality, urban council and Pradeshiya Sabha. In Jaffna, the central government has been working directly as in the case of the Ministry of Agrarian Development, the Ministry of Fisheries and Aquatic Resources Development (MFARD) under the coordination of Government Agent (GA). However, some ministries are under the provincial government which was introduced as a part of the 13th Amendment of the Constitution under the Indo-Lanka Accord in 1978 for the purpose of the power devolution.
- The Governor of Northern Provincial was appointed by the President only after the end of the conflict, in July 2009. In February of 2011, Northern Province Office has shifted from Trincomalee to Jaffna but is expected to settle eventually in Mankulam, a town between Kilinochchi and Vavuniya in 2013. The election of Provincial Council is expected in 2012.

(6) CBOs in Jaffna

- The role of CBOs for rehabilitation and community development and productive activities has been recognized and promoted under many government programmes in Sri Lanka.
- Before 1983, many active CBOs functioned in Jaffna District, but since then the conflict has weakened their activities. After 2009, the government and Non-governmental Organizations (NGOs) have commenced effort to invigorate CBOs.
- Weakness and development gap are issues on CBOs in Jaffna, reflecting effects of the conflict and the past projects, social change after the conflict, and the local characteristics of Jaffna communities. Besides, dependency and the lack of diversity in economic activities are concerned.
- Considering the characteristic of Jaffna communities, to develop CBOs requires their institutional strengthening and the social inclusion of vulnerable people into CBO activities.

(7) Socially Vulnerable People

- 31,995 Woman Headed Families (WHFs) were in the district as of August 2011. These widows are socially vulnerable, since many have to rear their children and act as heads of the households even though they have little work experience. Moreover, their presence in public arenas tends to be restricted.
- There were 4,796 persons with disabilities (PWD) in the district. They naturally experienced more difficulty in securing a livelihood than others.
- Other vulnerable groups include Samurdhi, or poverty-stricken, families. Livelihood and housing were main issues for them. They work as an unskilled labour. They lived in poor communities even before the conflict.

(8) Environmental Issues

- Limited water resources and over usage cause many water problems in Jaffna peninsula. Over pumping is making the underground water pollution with saline all over the peninsula. Because of saline water, 16,000 ha of agricultural land have been abandoned. In addition, well water is also



polluted by fertilizer, agrochemicals, and toilet nearby. The issue of water pollution affect on people's life seriously.

- Solid and liquid waste problems are another environmental issue in Jaffna, which has no water treatment facilities; all waste water is discharged without proper treatment. Medical waste, hazardous waste and human waste from septic tank are also dumped at the same domestic waste dumping site. These waste problems will become serious in proportion to a possible population increase and economic development.

(9) External Support

- International financing institutions and many donors have already operated in Jaffna to cover a wide range of development activities from humanitarian aid to the rehabilitation of basic infrastructure, and further to the longer-term development.<sup>1</sup>
- In addition to international financing organizations which provide several sector loans and programme loans for both post-conflict rehabilitation and longer-term development, India is supporting the construction of houses for returnees, the reconstruction of railway and the Kankasanthurai (KKS) Harbour, among other things, while China supports road construction.

### **Chapter 3    Agriculture**

Chapter 3 focuses on the agriculture sector in Jaffna. The following depicts some important aspects:

(1) Overview

- In 2009, the district had 62,269 farming households, which was 52% of all households, and 30,408 on-farm labourers.
- Main crops are rice (cultivated in 10,000ha), onion ( 1,920ha), banana ( 675ha), mango (655ha), grape (88ha) and various vegetables.
- The conflict had devastated the agriculture production in Jaffna, but the production has been recovering and now restored more than 90% of the pre-conflict level in terms of paddy and livestock production. It is expected that recovery to the pre-conflict level will be attained by 2013.

(2) Concerned Institutions

- Government agencies concerning the agriculture sector are Department of Agriculture (DOA), Department of Agrarian Development (DAD), Department of Animal Production and Health (DAPH), Coconut Cultivation Board (CCB) and Palmyrah Development Board (PDB). Department of Irrigation (DOI) and University of Jaffna (UOJ) also play an important role in the sector.
- The rehabilitation of the central coconut nursery of CCB was adopted for Infrastructure Rehabilitation Component (IRC) of a pilot project so that local farmers will be able to get quality coconut seedlings to restore the local coconut production.
- The World Bank, the Asian Development Bank (ADB) and FAO are major external institutions supporting to the agriculture sector. World Bank was financing tank renovation as well as the construction of ASC buildings and irrigation unit offices. ADB was financing the rehabilitation of

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<sup>1</sup> For exampla, "Valukkai Aru" scheme funded by World Bank is implemented by the Provincial Irrigation Department as a Reawakening Project.

salt water exclusion (SWE) bunds. FAO distributed farming inputs such as paddy and vegetable seeds, fruit seedlings, chicks, etc.

- There are 212 registered FOs in the district. Besides the FOs, ten growers' societies are operating in the selected five DS Divisions. FOs are generally a government-guided CBO and tend to be passive. While functioning as an organization representing the farmers, FOs are often disadvantaged with the lack of economic activities, weakness in leadership and administration capacity and a weak financial base. FOs also have the problems of weak leadership, poor management and insufficient capitals.
- There exist two national level policy papers, two provincial plans and a district level outline of livestock sector development. Despite some weakness in them, these plans certainly indicate development direction and actions to be taken.

### (3) Key Issues

- Assistance to returnees and IDPs; Thousands of hectares of land have been abandoned due to the displacement of people. Subsistence food cultivation is a need for returnees. At the same time, cash income sources must be provided for IDPs.
- Water Resources; the agriculture depends on rainfall and limited ground water resources. Farmers face water shortage during dry season. They also struggle with salinity in a considerable portion of the district. Since the use of fertilizers and irrigation water is high, groundwater has become polluted and saline.
- Major issues on production include i) labourer shortage due to competition with other industries, ii) the quality and quantity of seeds and planting resources, iii) the lack of supply of quality livestock breeds, iv) inadequate extension services, v) difficulty of obtaining manure and compost, vi) crop damages made by wild monkey, wild boar and stray cattle, and vii) pesticide residue on food.
- In marketing and agro-processing, challenges includes i) improvement of post-conflict market linkages, ii) modernization of marketplaces and storage facilities, iii) capacity building of CBOs, iv) processing of vegetables and fruit, and v) improved marketing of milk and animal products.

## **Chapter 4 Fisheries**

Chapter 4 discusses the present situation of fisheries in Jaffna District and their future.

### (1) Overview

- In 2009, the fishing population of 89,232 with 20,715 fishing households live in scattered coastal communities of Jaffna.
- Sri Lanka experiences two monsoon periods, southwest monsoon during the period from May to September and northeast monsoon during the period from November to February. Jaffna District is relatively sheltered from the southwest monsoon and the near-shore wave climate in the area is mainly influenced by the less severe northeast monsoon.
- Since June 2009, the fisheries production has registered a rapid recovery because fishing operations became mostly normalized; an increase in fish prices and the reduced price of fishing supplies also raised the motivation of local fishermen.



- The total fishery production is 20,739 ton in 2010. Main catches are rock fish (18%), carangid or paraw (13%), blood fish (12%), prawn (10%), shark/skate (8%), and small fish caught by shore seine (6%).

## (2) Concerned Institutions

- Governmental agencies directly concerned with fishers are Department of Fisheries and Aquatic Resources (DFAR) and National Aquatic Resources Research and Development Agency (NARA) under MFARD, and the College of Fisheries. The Department of fisheries in UOJ also contributes to the sector.
- Many foreign donors are interested in fisheries development in Jaffna, including a fishery anchorage in Pasayoor (UNOPS), a fishing harbour in Gurunagar (Denmark), a fishing harbour in Myliddy (Korea), and a fishing net factory in Gurunagar (India).
- The district has registered 118 FCSes, out of which 106 are active. They have been weakened by the conflict, and their member fishermen still often encounter difficulties in getting necessary support from the FCSes. Yet, the FCSes are still the most important organization for local fishermen, and many socially vulnerable people also earn small incomes by engaging marginal works associated with the FCSes. Long term assistance would be required to the capacity building of the FCSes.
- The College of Fisheries is responsible for fishery education and training in the district; many NGOs and donors entrusts the implementation of fisheries training to the College which is the only institute for practical fisheries education in the entire Northern Province. However, it suffered a shortage of staff, lack of facilities and poor teaching aids. Thus PDP Jaffna has reconstructed the school building and provided training equipment including a training boat.
- The Plan titled “Fisheries Sector Development in Northern Province of Sri Lanka” was published by MFARD in 2010 to describe an action plan in Northern Province. The Plan envisages by 2013 for Jaffna the introduction of 150 one-day boats and 15 multi-day boats, the development of four fish landing sites/coast protections, 13 anchorages/jetties, three fishing harbors in Myliddy, Thondaimanaru and Gurunagar.

## (3) Key issues

- Infrastructure Development: The condition of fishery infrastructure, including jetties, fish auction halls, and fish markets, is generally poor as a result of the conflict. Many fishermen sell fish in open space without shade, which quickly spoils the freshness and thus the value of catch. A strong need is felt for developing fisheries infrastructure.
- Production sustainability: Small fishing crafts have increased rapidly in the district since 2006. They operate in water near to shore. The destruction of coastal resources could possibly occur if nothing preventive is done. DFAR and other relevant organizations need to take prompt actions such as the establishment of a fisheries management system.
- Offshore fisheries development: Offshore fishery resources largely remain untapped by Jaffna fishermen primarily because they do not have many multiday boats though the number is increasing very recently. Infrastructure development such as construction of fishing harbours must proceed in parallel with the construction of multiday boats.
- Aquaculture development: Some had the opinion that brackish water areas in the district were unsuitable for aquaculture since the salinity was too high there. Even if this kind of opinion may reflect the truth, the district still has extensive marine water areas suitable for aquaculture

development around the islands. One possible means to avoid the depletion of coastal fish resources is aquaculture development.

- Training service: Upon the completion of the assistance from PDP Jaffna, the College of Fisheries will certainly contribute to development of offshore fisheries, aquaculture and fish processing in the future.

## **Chapter 5 Basic Development Policy Framework**

Chapter 5 summarizes a set of basic concepts and policy matters that are relevant in formulating a regional development plan and Road Maps for the development of agriculture, fisheries and communities.

### **(1) Grand Vision of Jaffna toward 2020**

- As a reference to ponder the Road Maps, the Grand Vision of Jaffna toward 2020 embodies a long-term vision, as opposed to a detailed plan, for the future of Jaffna in the post-conflict era. The Vision is outlined with three aspects: i) economic growth forecast by segment, ii) challenges of the individual economic sectors and iii) strategic role of Jaffna.
- In 2010, the shares of Jaffna's economic segments are 15.1% for the primary industries, 8.3% for the secondary industries and 76.6% for the tertiary industries. The percentages in 2020 are forecasted 15.5%, 17.1% and 67.4% respectively. Although agriculture and fisheries would still remain as Jaffna's traditional economic dynamos in 2020, a shift of gravity toward the secondary industries would be a clear trend. As a result, the composition would be somehow nearer to the today's national average.
- The analysis on challenges of the individual economic sectors reveals that, in the former half of the 2010s, Jaffna must attain, among other things, i) an economic jump start with agriculture, fisheries and construction sectors, ii) consolidation of basic economic and social infrastructures, and iii) catching up with advanced technology. In the latter half of the decade, what must be done include i) realizing balanced economic development with growth points on manufacturing, commerce and finance sectors, ii) making Jaffna a transportation hub with south Asia and southeast Asia and iii) preparing business environment conducive to Foreign Direct Investment (FDI).

### **(2) Framework for Agriculture Development**

- Overall vision of the agriculture sector is to recover the pre-conflict production level and to develop sustainable agriculture while conserving the environment.
- The strategy, goal and target for different stages for the agriculture sector were constructed in four categories, reflecting agricultural traits in three distinct agri-geographical areas plus livestock development. The four categories are i) vegetable and fruit production in highland, ii) lowland paddy production, iii) sandy soil agriculture at outlying islands and coastal areas, and iv) livestock production.
- As for vegetable and fruit production in highland, goals towards 2020 were set as; i) the increased quantity of quality local specialties will be marketed nationally and internationally, and ii) a significant contribution will be made to the district economy.



- For lowland paddy production goals towards 2020 were set up as: i) efficiency and profitability of paddy cultivation will be improved, and ii) the 40% self-sufficiency of rice in the district will be achieved.
- For sandy soil agriculture, goals towards 2020 were set up as: i) local demand for coconut and palmyrah will be satisfied 100% by local produce, ii) value added products of coconut and palmyrah will be marketed nationally and internationally, etc.
- For livestock production, goals towards 2020 were set up as: i) local demand for livestock products will be satisfied 100% with local produce, ii) value added products of livestock will be marketed nationally and internationally, and iii) livestock rearing will be maintained as a part of integrated farming.

### (3) Framework for Fisheries Development

- Overall vision of the fisheries sector is to realize sustainable fisheries development through well-balanced fishery resources exploitation and the formulation of a resources management system.
- Similarly to agriculture, three categories for fisheries development are set up. They are i) sustainable coastal fisheries, ii) offshore fishery development, and iii) aquaculture development.
- One of important means to realize the balanced exploitation of ocean resources would be the fishing effort transfer from coastal fisheries to new activities of off-shore fisheries and aquaculture.
- As a precondition for shifting to offshore fisheries and aquaculture development, capital investment would be needed to construct modern fishing harbours and an aquaculture hatchery in the district.
- Chapter 5 also contains an interesting figure titled “Expected Future Fishing Ground in Jaffna District.” This is the first map ever made to visualize the current and potential use of the sea surrounding Jaffna by the local fisheries and aquaculture.

### (4) Framework for Community Development

- Overall vision of community development is to strengthen CBOs along with the promotion of mutual assistance, whereas it increases sustainability in village development.
- In a community development context, the institutional development of CBOs and the promotion of social inclusion of socially vulnerable people are two pillars of strategies.
- The institutional development of CBOs would require i) assuring to adopt community approach for village development projects, adjusting with the condition of CBOs, and ii) improving set up to promote community approach.
- The social inclusion in communities would require i) assessing living conditions and needs, ii) providing sufficient assistance to meet the basic needs, iii) promoting resettlement process, and iv) supporting the establishment of a platform.

## **Chapter 6 The Quick Impact Pilot Projects (QIPP)**

Chapter 6 is devoted to reporting on the QIPP, which have been implemented immediately after the beginning of PDP Jaffna as a swift provision of development assistance in agriculture and fisheries sectors. The QIPP has completed within 2010 and rehabilitated infrastructure was handed over soon after.

(1) Objectives of QIPP

- The objectives of the QIPP was to contribute to the rehabilitation through the implementation of quick impact type renovation and construction works in the district and, by doing so, to examine effective approaches for rehabilitation and reconstruction in the district.

(2) Achievements and Effects

- The seven minor irrigation tanks were renovated in collaboration with FOs, which were the direct beneficiaries of the project. The renovation works increased the water storage capacity to 45,742m<sup>3</sup> and the retention capacity in dry season, benefiting 350 farmers.
- PDP Jaffna also renovated Kakathivu Jetty and Navanthurai Jetty with the construction of durable and longstanding amour stone structure to reflect wave energy. This new feature is expected to have a positive impact on the jetty structures and causeways in Jaffna District. The two jetties directly benefited 1,269 fishermen to resume and improve their livelihood activities.
- The Team carried out the Operation and Maintenance (O&M) Training to FOs and FCSes to develop action plans by specifying the type and frequency of O&M activities for each tank and jetty. These action plans were then endorsed by DAD for the seven tanks and by DFAR for the two jetties.
- Also, the Team organized leadership training and accounting training for these FOs and FCSes to build their institutional capacity.

(3) Lesson Learned

- QIPP brought positive impacts to the beneficiaries although the urgent rehabilitation works have limitations in satisfying the needs for intensive use of local labour and the quality of work. Learned lessons are summarized below:
  1. The contractors, including FOs, in Northern Province have a serious lack of overall construction management skills because they were not involved in construction projects during the conflict.
  2. A low fulfillment in the positions for government officers and the lack of budget are serious issues in Jaffna District, which may hinder efficient and effective renovation works.
  3. Urgent rehabilitation using labour intensive methods can generate income for people including returnees, IDPs and other vulnerable groups although labour intensive methods have limitations in quality control of construction works within a limited period.
  4. Safety management in construction works should be emphasized to contractors and stakeholders, taking into consideration the risks of landmines and UXOs as well as insufficient emergency medical services in Jaffna.
  5. Because of the limited period of QIPP, the Team tried to build the capacity of the CBOs through workshops on O&M, leadership and accounting after the completion of renovation works. This assistance provided an important opportunity for the CBOs to rethink their roles and responsibilities.

## Chapters 7 Implementation of Pilot Projects

Chapter 7 presents facts concerning the implementation of the Pilot Projects implemented by PDP Jaffna. The Pilot Projects were designed in such a way that they would produce expected outcomes and lessons which would be useful in drawing the Road Maps and formulating relevant future projects.

### (1) Selection Process

- Owing to time and other constraints of PDP Jaffna, out of 15 DS Divisions within the district, the five DS divisions were selected for the implementation of the Pilot Projects. They are Jaffna, Velanai, Chavakachcheri, Kopay, and Point Pedro. In selecting these five DS divisions, the Team also considered their geographical representation from varied geographical traits within the district.
- Ideas of pilot projects were provided by various institutions, including relevant government agencies, farmers, donors, NGOs as well as from within the Team.
- In an early preliminary selection process, attention was paid to i) practicality of implementation, ii) security, iii) avoidance of duplication with other donors, and iv) project quality and mindset.
- In finalizing the selection, the Team appraised pilot projects by adopting the criteria of i) overall effectiveness and efficiency, ii) technical impact, iii) economic impact, iv) social impact, v) environmental impact, and vi) capacity of implementing institutions.

### (2) Approved Pilot Projects

- The following is the list of implemented pilot projects. AC means pilot projects in the agriculture field, FC for fisheries and CC for the community sector.

AC-1: Strengthening of Seed Production Cooperative Society

AC-2: Strengthening of Agricultural Extension Service

AC-3: Strengthening of Mango Growers Society

AC-4: Promotion of Mushroom Cultivation

AC-5: Rehabilitation of Atchchuvveli Coconut Nursery (a combination project with IRC)

AC-6: Improvement of Milk Processing Facility in Point Pedro

FC-1: Integration of Community-based Fishery Management System on the District Level

FC-2: Introducing Seaweed Farming as an Alternative Livelihood

FC-3: Introducing Sea Cucumber Farming as an Alternative Livelihood Enhancement

FC-4: Introduction of Fish Aggregating Device (FAD) to Small-scale Fishermen

FC-5: Construction of Fish Auction Halls

FC-6: Reconstruction of Regional College of Fisheries and Nautical Engineering  
(a combination project with IRC)

CC-1: Business Development and Marketing of Coir and Palmyrah Products

CC-2: Business Development and Marketing for Food Processing Products

CC-3: Promotion of Mushroom Cultivation Business

CC-4: Small-scale Business Development (Poultry)

CC-5: Support for the Widows' Society



## **Chapter 8    Monitoring and Evaluation of and Lessons Learned from the Pilot Projects**

Chapter 8 presents details concerning the monitoring and evaluation of the Pilot Projects and lessons learned from their implementation. Learned lessons were reflected in the Road Maps to an extent possible. Prior to the implementation of the Pilot Projects, the Team conducted a baseline survey to learn the socio-economic situation of the target communities and to set up performance indicators of the Pilot Projects. The following is some notable points observed through their implementation.

### **(1)    Monitoring, Evaluation and Lessons Learned in the Agriculture Sector**

- All the pilot projects for the agriculture sector have finished successfully or are projected to do so soon. All are expected to contribute to improve the productivity of agriculture through supplying quality paddy seed, mushroom spawn and coconut seedlings, improved skills and knowledge of farmers and increased milk processing capacity. Capacity development was achieved in many ways, such as increasing involvement of member farmers to the activities of FSs and building up capacity of agricultural instructors, operators of facilities and machineries and administrative staff of the FSs.
- The success of the pilot projects was attributable to the commitment of concerned governmental institutions including DOA, CCB and DAPH. However, considering the frequent postponements of scheduled training programmes and needs for latest technology in farmers' field, the Team felt a necessity of enhancing, in quality and quantity, the human resources of these institutions.
- Leadership within agricultural CBOs is another essential element. The Team observed the success of LIBCO Point Pedro's development in its sales outlets has been brought about by the good leadership of a veterinary officer posted there. Leadership of newly established societies such as the Mango Society and the Mushroom Society are not strong enough. They need continuous support until the leadership being nurtured.
- A total of 116 (10% of the total number of recipients) socially vulnerable people received training under the five pilot projects. The Team observed many IDPs tended to work as daily labours rather than attending the training programmes which means lose their one-day earning.

### **(2)    Monitoring, Evaluation and Lessons Learned in the Fisheries Sector**

- All the pilot projects for the fisheries sector are expected to be completed successfully. Most have actually achieved their objectives to initiate sustainable fisheries development through well balanced fisheries resources exploitation and the formulation of a resources management system. Capacity development progressed in many ways, such as strengthening of managing ability of FCS Unions' Federation, technical and institutional skill-up of FCSes for new fish production technologies such as FAD and aquaculture, strengthening of training and educational abilities in the fisheries institution.
- More than 800 socially vulnerable people were engaged in the pilot projects. Social inclusion was effectively promoted by strengthening mutual assistant system of target FCSes.
- Factors contributing to the success of the pilot projects are the selection of good implementing partners, close coordination with DFAR, exploitation of local potential skills and knowledge, leaderships in target CBOs, and the high motivation of beneficiaries and CBO's executives. In the meantime, impeding factors included difficulty in acquiring administrative permissions,

unpredictable natural conditions in water temperature, weather fluctuation and biological cycle for target species. The lack of social rules was also a difficulty when introducing new techniques such as FAD.

### (3) Monitoring, Evaluation and Lessons Learned of Pilot Projects for Women

- All the pilot projects for women in community are expected to finish successfully. All the concerned Woman Rural Development Societies (WRDSs) achieved the goals of enhancing techniques, widening the varieties of products, and raising the quality of products. Capacity development was achieved in many ways, such as by producing more active members, encouraging proper record keeping, nurturing social roles, establishing links with government agencies, and extending leadership.
- Compared with their previous participation in WRDS activities, more socially vulnerable people were engaged in the pilot projects. Social inclusion was effectively promoted by society members and government officers.
- The selection of committed implementing agencies, close coordination with relevant stakeholders, the availability of resources in the local area, motivated committee members, and the establishment of marketing opportunities can be pointed to as factors contributing to the success of the pilot projects. At the same time, emerged impeding factors included the difficulty in acquiring materials, price increases in raw materials, and problems in the social system.

## **Chapter 9 Road Maps toward 2020**

Finally, Chapter 9 proposes Road Maps in agriculture, fisheries and community development toward 2020 and beyond. The chapter starts with an explanation about a process consisting of 11 steps for developing the Road Maps. Through these steps, the Team produced the Road Maps for each of category in the sectors: that is, four for agriculture development, three for fisheries development and two for community development. They depict major actions necessary for accomplishing the visions set for these sectors. The drafts of these Road Maps were distributed at the First and Second Development Workshop in Jaffna for review by participants. The following indicates some critical points of the Road Maps.

### (1) Road Maps for Agriculture Development

- Considering the present status, strategies, and goals of each of the four categories, the Team identified the required actions for the four categories. Among those required actions, the Team selected critical actions through the series of discussion. Converging critical actions, the Team proposes programmes/projects for each of the four categories as follows;
- The Highland Vegetable and Fruit Production Development Programme: This programme is composed of five projects including strengthening of the agri-extension service capacity and promotion of Jaffna specialties.
- The Lowland Paddy Production Development Programme: This programme is composed of five projects including strengthening the supply of quality paddy seed and improvement of post-harvest technology.

- The Sandy Soil Agriculture Development Programme: This programme is composed of three projects including reinforcement of the supply of coconut seedlings and coconut cultivation technology, and improvement and development of palmyrah products.
- The Livestock Development Programme: This programme is composed of five projects including supplying improvement of breeds of chicks and goats, and promotion of artificial insemination.

(2) Road Maps for Fisheries Development

- Among the required actions the Team placed in the development framework, critical actions which are absolutely indispensable for achieving the goal were selected through series of discussion with related agencies and stakeholders. The Team proposes three programmes and eleven projects covering the critical actions in the fisheries sector as summarized below.
- The Programme for Strengthening Fishermen's Organization in Coastal Communities: This programme is composed of four projects including for infrastructure development and resources management aiming at strengthening the capacity of fishermen's organizations.
- The Offshore Fisheries Development Programme: This programme is composed of four projects including for fishing harbor and multi-day boat development, and offshore resources management aiming at promoting offshore fishing ground exploitation.
- The Aquaculture Development Programme: This programme is composed of three projects including for preparation of master plan for aquaculture development and its implementation, and strengthening of Department of Fisheries at UOJ.

(3) Road Maps for Community Development

- One of the required actions for institutional development is assuring the adoption of the community approach. This approach can be adopted into other sector projects, such as infrastructure development and livelihood development. Second approach for institutional development is improving the setup to provide services for the community approach, targeting the capacity development of government officers and local NGOs.
- Several projects are proposed as effective measures to involve socially vulnerable groups in the development field. Survey on socially vulnerable groups' issues/needs can be pointed out as one of them, which is necessary to determine the appropriate measures to enhance social inclusion. Another project is to conduct group counseling training to build platforms among socially vulnerable groups and to formulate Self-Help Groups (SHGs) for effectively empowering people through the sharing of similar experiences and compassion.

(4) Implications for Longer-term Development

- A fundamental weakness in the local society is the lack of knowledge about new technologies and innovations. Fortunately, however, many of the new technologies and innovations are available within Sri Lanka, as far as agriculture, fisheries and small livelihood sectors are concerned. Now, every effort should be made to transfer new technologies to people in Jaffna through vocational training, extension service, university education, retraining of public-officers and NGO practitioners.
- It is clear that once Jaffna's ongoing infrastructure rehabilitation projects are completed -- specifically the KKS Harbor, Jaffna-Colombo railway track, and A9 Highway -- more investment will be forthcoming by companies of the south, Tamil diasporas and Indian investors. The local people should



be prepared to take the best advantage of infrastructure development in the mid-2010s.

- For the implementation of development projects proposed in this report, the GOSL should take necessary measures to employ new officers as quickly as possible, in addition to develop the capacity of the existing officers and consider measures to keep their motivation high.
- Market consideration is one of very important elements to succeed in developing agriculture or fisheries. A big change in product marketing would be expected once the current rehabilitation works at the KKS Harbor finish.
- Capacity development of CBOs should primarily target CBOs that are directly related to these production sectors, typically FO, FS and FCS. However, women should be given an alternative assistance channel, and WRDSs seem to be the most appropriate channel to improve women's livelihoods. Some CBOs already have a supporting mechanism for socially vulnerable people in the area. They should form a role model for other societies.

# **The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District**

## **Draft Final Report**

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Appendix 7-20: Pilot Project (C-7) Support for the Widows' Society

(*Appendix 7-2 ~ 7-20 : Related with Section 7.2 / 7.3*)

Appendix 7-21: As-build Drawings of the Coconut Nursery (*Related with Section 7.4.5*)

Appendix 7-22: As-build Drawings of the Fishery College (*Related with Section 7.5.6*)

Appendix 7-23: Equipment List for the Fishery College of Fisheries and Nautical Engineering in Jaffna  
(*Related with Section 7.5.6*)

### **Appendix for Chapter 9      Road Maps toward 2020**

Appendix 9-1: Pre-Feasibility Study for Fishery Harbor Development in Point Pedro, Jaffna District  
(*Related with Section 9.8*)



## Acronyms and abbreviations

ADB	The Asian Development Bank
AI	Agricultural Instructor
AIns	Artificial insemination
ALDL	the Agro Livestock Development Loan scheme
ARS	The Agriculture Research Station
ASC	Agrarian Service Centre
BTL	Bund top level
BIQ	Basic Information Questionnaire
BOC	Bank of Ceylon
CARE	the Conflict Affected Region Emergency Project
CBSL	Central Bank of Sri Lanka
CBO	Community Based Organization
CCB	Coconut Cultivation Board
CEA	Central Environmental Authority
CFC	Ceylon Fisheries Corporation
CFHC	Ceylon Fishery Harbor Corporation
CPO	Central Project Office
CRB	Cooperative Rural Banks
DAD	Department of Agrarian Development
DAPH	Department of Animal Production and Health
DATC	District Agricultural Training Centre
DCD	Department of Cooperative Development
DD	Deputy Director
DFAR	Department of Fisheries and Aquatic Resources
DOA	Department of Agriculture
DOA (Extn)	Office of Deputy Director of Agriculture
DOI	Department of Irrigation
DRD	Department of Rural Development
DRDO	District Rural Development Officer
DS	Divisional Secretariat
DSJ	Divisional Secretariat of Jaffna
EIA	Environmental Impact Assessment
EnREP	the Emergency Northern Recovery Project

FAD	Fish Aggregating Device
FCS	Fishermen's Cooperative Society
FDI	Foreign Direct Investment
FGD	Focus group discussion
FI	Fisheries Inspector
FMTC	Farm Mechanization Training Center
FO	Farmer's Organization
FRP	Fiberglass Reinforced Plastic
FS	farmers' cooperative society
FSL	Full supply level
GA	Government Agent
GDP	Gross Domestic Products
GIZ	German International Cooperation
GN	Grama Niladhari
GOSL	Government of Sri Lanka
GT	Gross Tonnages
GTZ	The Deutsche Gesellschaft für Technische Zusammenarbeit
HNB	Hatton National Bank
HSZ	High Security Zone
HWL	High Water Level
ICTAD	Institute for Construction Training and Development
IDB	Industrial Development Board
IDP	Internally Displaced Person
IOM	International Organization for Migration
IPM	Integrated Pest Management
IPNS	Integrated Plant Nutrition System
IRC	Infrastructure Rehabilitation Component
JICA	Japan International Cooperation Agency
KOICA	Korean International Cooperation Agency
KKS	Kankesanthurai
LIBCO	Livestock Breeders Cooperative Society
LKR	Sri Lankan Rupees
LTTE	Liberation Tigers of Tamil Ealam
LWL	Low Water Level
M/C	Mahinda Chintana
MC	Municipal Council

MED	Ministry of Economic Development
MFARD	Ministry of Fisheries and Aquatic Resources Development
MFP	Ministry of Finance and Planning
MNB	Ministry of National Building and Estate Infrastructure Development
MOU	Memorandum of Understandings
MPCS	Multi Purpose Co-operative Society
NAP	the National Agricultural Policy
NARA	National Aquatic Resources Research and Development Agency
NCRCs	The New Comprehensive Rural Credit Scheme
NGO	Non-governmental Organization
O&M	Operation and Maintenance
OFC	other field crop
PA	Program Assistant
PAMA	Public Assistance Monthly Allowance
PAMP	Poverty Alleviation Microfinance Project
PDB	Palmyrah Development Board
PDP Jaffna	The Project for Development Planning for the Rapid Promotion Of Reconstruction and Development in Jaffna District
PFI	Project Financial Institutes
PO	People Organization
PRO	Project Regional Offices
ProMIS	Promotion of the Microfinance Sector
PTF	Presidential Task Force
PS	Palm development cooperative society
PWD	Persons with disability
PWSN	people with special needs
QIPP	Quick Impact Pilot Project
Rap	the Reawakening Project
RDB	Regional Develop Bank
RDO	Rural Development Officer
RDS	Rural Development Society
RLF	Revolving Loan Fund
SBS	Samuruthi bank Society
SEEDCO	Seed Production Cooperative Society
SEEDS	Sarvodaya Economic Enterprise Development Society Ltd
SHG	Self-Help Group

SME	Small and Medium scale Enterprises
SMO	Subject Matter Officer
S/W	scope of work
SWE	salt water exclusion
TCCS	Thrift & Credit Co-operative society
TEU	twenty-foot equivalent unit
UDA	Urban Development Authority
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNIDO	United Nations Industrial Development Organization
UNOPS	United Nations Office for Project Services
UOJ	University of Jaffna
UOM	University of Moratuwa
USD	United States Dollars
UXO	Unexploded Ordnance
WDO	Woman Development Officer
WFP	World Food Programme
WHF	Woman Headed Family
WHO	World Health Organization
WRDS	Woman Rural Development Society



## **Currency equivalents**

as of November 2011

Sri Lankan Rupees (LKR) 1.00 = Japanese YEN (JPY) 0.690

US dollar (USD) 1.00 = JPY 75.84

Sri Lankan Rupees (LKR) 100 = USD 0.9098

## List of Study Team Members

NAME	POSITION TITLE
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Ms. Imazato Isa	Community Development / Income Generation
Mr. Yonemaru Takayuki	Facility Design 1 / Construction Management 1
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Mr. Matsumoto Shinichiro Mr. Miyashita Mitsuru	Facility Design 2 / Construction Management 2 / Construction Supervision 1
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**Chapter 1**  
**Introduction**

# Chapter 1 Introduction

## 1.1 Background

In Sri Lanka, the conflict of over a quarter century finally ended in May 2009. The number of Internally Displaced Persons (IDPs) increased since January 2009, reached over 280,000 at one time. Recently, however, as the efforts of the Government of Sri Lanka (GOSL) to facilitate the return of IDPs intensified, the approximate number of IDPs remaining in welfare centers has considerably declined.

Compared to the other districts of Northern Province, basic public facilities and social services are better in Jaffna District. Security measures and other controls such as fishing restrictions are also being relaxed. By and large, people's life in Jaffna is gradually improving except in some specific areas.

On the other hand, some public facilities and economic infrastructure which have become obsolete or have been abandoned because of the long conflict. In addition, demining is yet to be completed, thereby posing an obstacle to the resettlement in ex-High Security Zone (HSZ) areas within Jaffna.

Jaffna District has been the financial and socioeconomic centre in Northern Province, with more than half the population of the province living in Jaffna. Thus, the reconstruction and development of Jaffna District would help raise the socioeconomic status of the rest of Northern Province as well. For example, agricultural and fisheries training institutions located in Jaffna have a mandate to deliver services to the entire Northern Province.

Historically, Community Based Organizations (CBOs) such as Farmer's Organization (FO) and Fishermen's Cooperative Society (FCS) have been the institutional base for agriculture and fisheries, currently the major economic sectors of Jaffna District. Accordingly, reconstruction and development assistance to the mutual support and self-help mechanism of CBOs is expected to contribute to the overall reconstruction and development of the district and beyond.

On the other hand, Japan's policy of providing economic assistance to Sri Lanka in 2009 stipulated that Japan's assistance in Northern Province will prioritize subjects that can effectively bring about tangible benefits to those adversely affected by the conflict and, at the same time, improve social services that facilitate social equity.

In response to the request from GOSL to assist in its efforts in reconstructing and developing the district, the Japan International Cooperation Agency (JICA) fielded the Preliminary Study Team. This Preliminary Team and the Ministry of National Building and Estate Infrastructure Development (MNB) of GOSL have reached an agreement on the scope of work (S/W) on the Project for Development Planning for the Rapid Promotion of Reconstruction and Development in Jaffna District (hereinafter "PDP Jaffna" or "the

Project”) on 19 January 2010. The sketch presented below was used to share the original overall concept of the Project between GOSL and the JICA Preliminary Study Team.

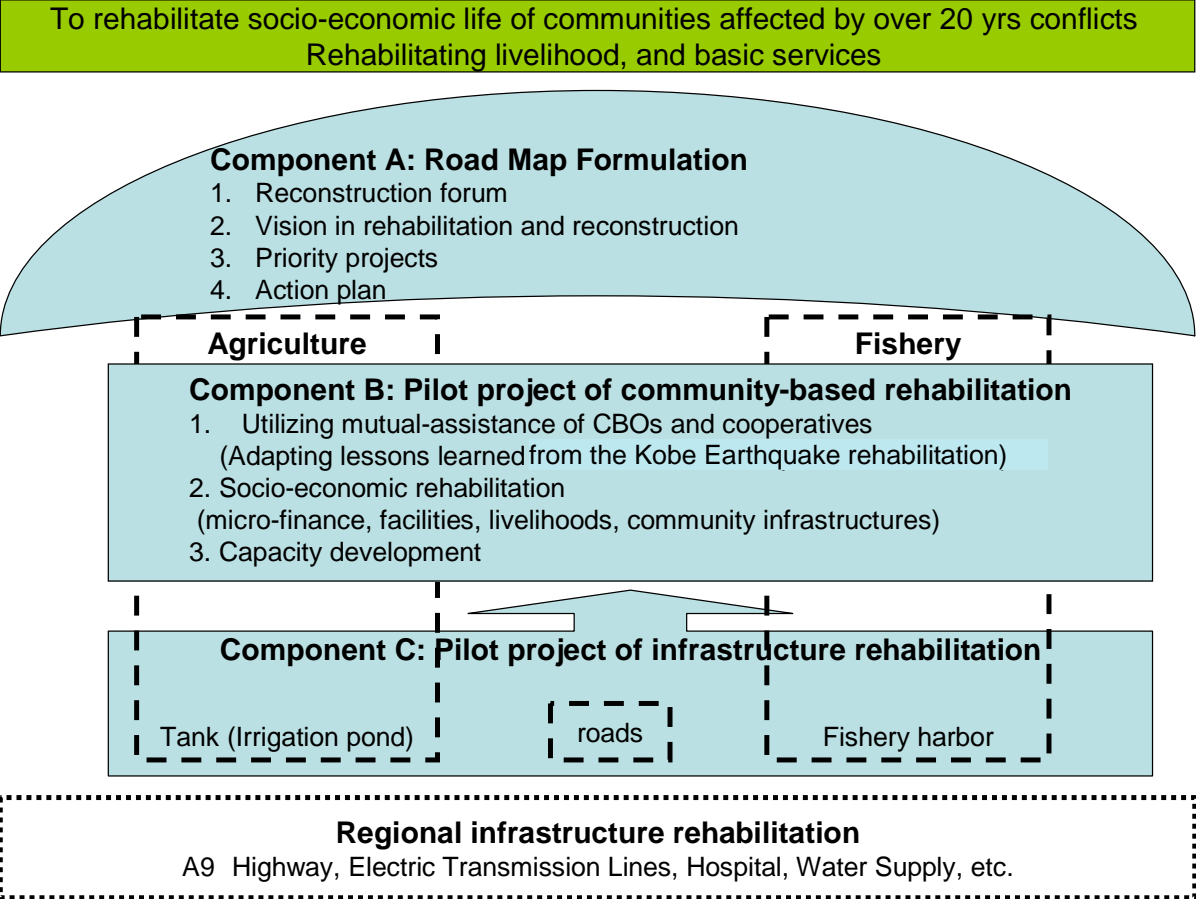


Figure 1- 1: Overall concept of the Project

1.2 Objectives

The PDP Jaffna had following objectives:

- Assist the local people of the district, including IDPs, in rebuilding the socioeconomic structure by formulating a Regional Development Plan and Road Maps, and implementing Pilot Projects and Quick Impact Pilot Projects (QIPP).
- Indicate a way to reconstruct the regional economy by, among other things, strengthening various CBOs such as FO, FCS and Women’s Rural Development Society (WRDS).

1.3 Implementation

Implementation Process

The fieldwork for PDP Jaffna began in April 2010 and ended in September 2011. The Project implementation process is illustrated in the flow chart of Figure 1- 2 on the next page. The flow chart is divided into four major sections: three components of Project Management, Road Maps, Pilot Projects, and QIPP. The core activities of the Project are indicated in orange.



In terms of reporting in PDP Jaffna, the Inception Report was prepared at the very beginning, followed by the Progress Report in August 2010. The Interim Report written in January 2011 had bridged these early reports and this Draft Final Report. Incorporating comments of the National Steering Committee (NSC) and the District Steering Committee (DSC), the Team will complete the Final Report and submit it to GOSL and JICA in October 2011.

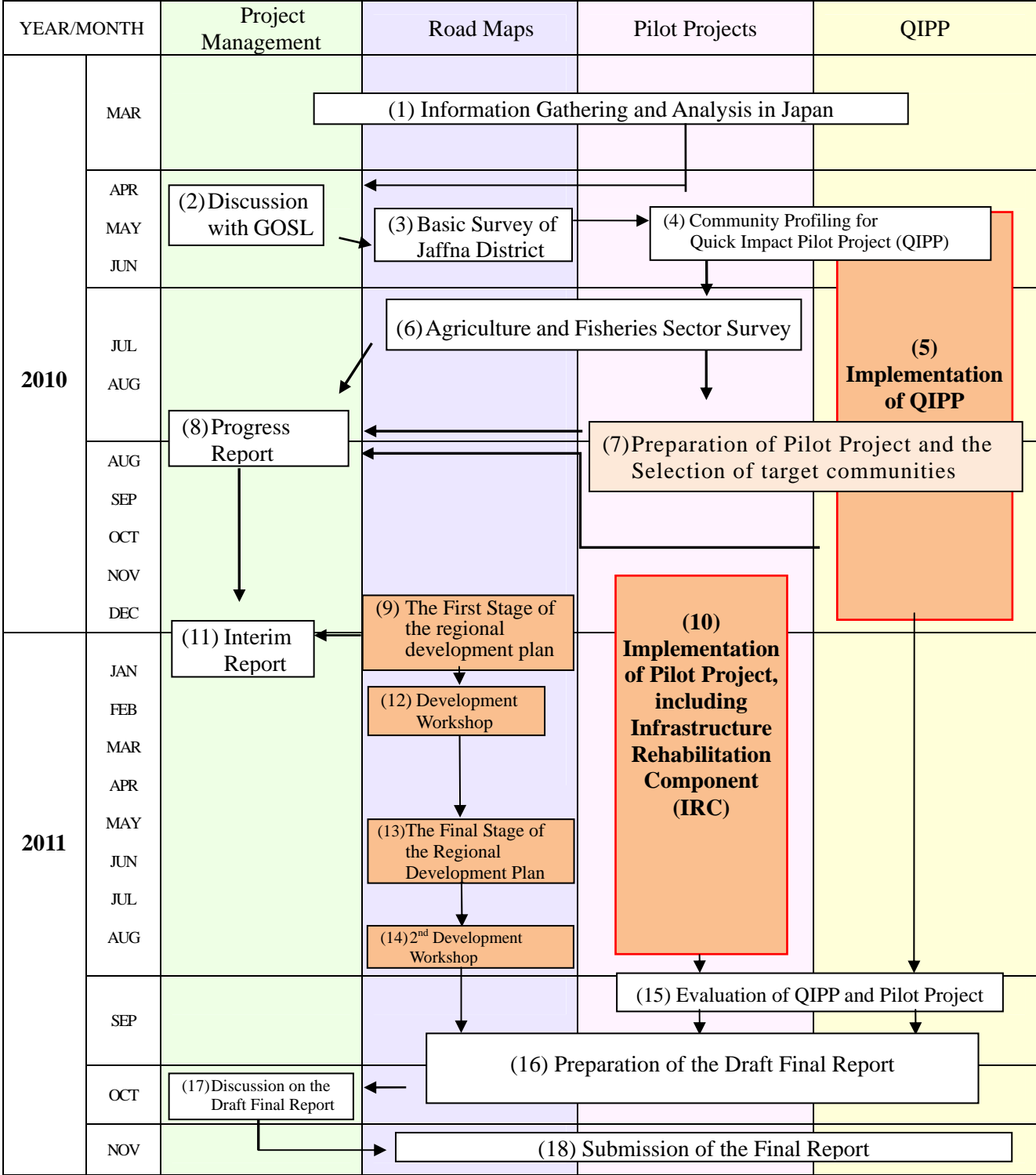


Figure 1- 2: Implementation process of the Project

### Steering Committees

MNB was originally the executing agency of the Project, while the District Secretariat of Jaffna (DSJ) was the implementing agency. However, since MNB was subsequently integrated into the Ministry of Economic Development (MED) through the administrative reform of GOSL, MED has now assumed the role of the executing agency.

The NSC was established at the central level in order to determine the basic policies to steer PDP Jaffna, while the DSC was organized in order to facilitate project activities on the ground. These committees have the following member organizations:

- (1) National Steering Committee (NSC)
  - Ministry of Economic Development (MED)
  - Ministry of Finance and Planning (MFP)
  - Northern Province
  - A designated consultant of the Presidential Task Force (PTF)
  - Government Agent (GA)/District Secretary of DSJ
  - JICA Project Team
  - JICA Sri Lanka Office
  - Embassy of Japan (observer)
- (2) District Steering Committee (DSC)
  - Government Agent (GA)/District Secretary of DSJ
  - Department of Agriculture (DOA), Jaffna District
  - Department of Agrarian Development (DAD), Jaffna District
  - Coconut Cultivation Board (CCB)
  - Palmyrah Development Board (PDB)
  - Department of Fisheries and Aquatic Resources (DFAR), Jaffna District
  - Department of Cooperative Development (DCD), Jaffna District
  - Northern Province
  - Ministry of Economic Development (MED)
  - Observers such as development partners, if necessary
  - JICA Project Team
  - JICA Sri Lanka Office
  - Embassy of Japan (observer)

In addition, by holding the so-called District Forum, close and periodic consultation with the GA of Jaffna and relevant departments and organizations has been maintained throughout the implementation period of the Project. This Forum functioned well under the chair of the Jaffna GA as a medium for discussing a variety of development issues and making swift decisions at the operational level. Line agencies located in Jaffna and concerned Divisional Secretariats (DSs) and nongovernmental organizations (NGOs) participated in the District Forum.

## Components

The Project comprises the following three components:

- Formulation of a regional development plan and Road Maps including the individual projects for reconstruction and development
- Pilot Projects: implementation of pilot project activities for community development
- QIPP: provision for the physical rehabilitation of irrigation tanks and fishing jetties

### **1.4 Project Area**

The area that the Project covered was, in principle, identical to Jaffna District. The entire area of the district is 1,026km<sup>2</sup>, out of which 96km<sup>2</sup> is covered by inland water bodies. As per the national census of 1981, the population of the district was 738,800; however, in 2010, the population was estimated to be 611,000. This decline in the population is attributed to people fleeing the area in order to avoid the conflict.

The district has the understructure of 15 DS Divisions. This understructure has 435 Grama Niladhari (GN) Divisions, which in turn have 1,205 villages. In parallel with the aforementioned administrative bodies, the district has 17 governmental bodies—the Municipal Council (MC) of Jaffna, 3 Urban Councils and 13 Pradeshiya Sabhas.

Out of the 11 DS divisions of the district, the 5 DS divisions of Jaffna, Velanai, Chavakachcheri, Kopay, and Point Pedro were selected for the implementation of the pilot projects. (The section of 1.8 below will describe the Pilot Projects.) Only five DS divisions were selected due to time, security, and other constraints of PDP Jaffna. In selecting these DS divisions, the Team also focused on selecting areas that would represent the geographical diversity of the district. The procedures and seven criteria used for selecting these five DS divisions are discussed in Chapter 7.

### **1.5 Framework for Development Planning**

This report presents “the Grand Vision of Jaffna toward 2020” and the Road Maps for agriculture, fisheries and community development from 2011 to 2020. They were built on the following thoughts:

#### **(1) Macroeconomic Situation**

Since the manufacturing industry remains weak and tourism is still in the infancy stage in the district, it is reasonable to assume that the recovery and growth of the entire economy of Jaffna will be largely dependent on contributions from the agriculture and fisheries sectors, at least for a few years in the future. In general, the agriculture and fisheries sector of the district is benefiting considerably from new market opportunities that have materialized with the opening of the A9 highway.

## (2) CBOs

Before 1983, many active CBOs functioned in Jaffna District; however, the conflict has weakened CBO activities over the past thirty years. Moreover, when returnees and residents of host communities often had to share houses after the end of the conflict, many CBOs experienced difficulties in including the returnees in their activities. The Team considers two important strategies for promoting local CBOs: capacity development and social inclusion of conflict-affected vulnerable groups in CBO activities.

## (3) Diversified Needs

The district is on the transition from the urgent relief stage during and immediately after the conflict to the rehabilitation stage and eventually to the longer-term development stage. However, these three stages are not mutually exclusive and actually exist simultaneously in today's Jaffna, and therefore the requirements specific to each of these stages must be taken into consideration in a quasi-independent manner.

In this regard, the recent GOSL policy paper entitled "Joint Plan for Assistance Northern Province 2011" made the following statement on agricultural policy in 2011.

*The strategy will also ensure a more complete recovery and economic growth for the resettled communities, bridge the gap between relief and early recovery, and move towards the sustainable rehabilitation of the sector and longer-term development of the Northern Province, including promotion of new technologies (i.e., drip irrigation) and crop diversification.*

This statement is relevant to Jaffna District. As Chapter 2 provides more information on the Joint Plan, basic policy standpoints advocated in this document are largely identical to the Team's recommendation for agriculture and fisheries development in Jaffna District. The district stands at the very important juncture of shifting from recovery to sustainable rehabilitation and longer-term development. In essence, JICA is supporting PDP Jaffna's efforts to specify and visualize the actions, projects, and programs that are required beyond this juncture.

## 1.6 Focused Sectors

Jaffna District has suffered the conflict for three decades, which not only devastated infrastructure and economic capabilities, but also damaged the social services in the district and impacted the psychological state of the local inhabitants. Thus, the developmental needs in the district are considerably diverse. The simultaneous existence of different recovery and development phases also stretches both ends of the spectrum of developmental needs of the district.

However, as discussed earlier, it is also true that the district's economic development must be based on the agriculture and fisheries sectors at least for the next few years because Jaffna's current inadequate infrastructure and weak social system will remain ineffectual in the development of manufacturing and

other industries. The fact that the majority of returnees are farmers and fishing folk is also a key factor in the selection of these sectors. In addition, needless to say, with its limited human and financial resources, PDP Jaffna was incapable of meeting all the development needs of the district. On account of these facts, the focus of the Project has been on the agriculture and fisheries sectors and community development.

Despite an emerging boom of financial and commercial businesses in the city center, a majority of the people still live in semi-urban and rural areas in which CBOs are an important part of the socioeconomic fabric. Therefore, the Project focused on strengthening the capacity of the CBOs. The Project also analyzed the needs of returnees and IDPs and other socially vulnerable groups and reflected those needs in its development plans to the furthest extent possible.

## **1.7 Framework of Road Maps**

PDP Jaffna designed Road Maps for agriculture, fisheries and community development. This process was conceptualized along three axes: geographical subsectors, type of intervention, and time.<sup>1</sup>

The first dimension is the geographical division that is always important in planning the primary industry, the success or failure of which is fundamentally determined by nature. Despite the district's relatively small size, its agriculture sector is rather diversified and classified into three distinct categories—vegetable and fruit production in highlands, lowland paddy production, and sandy soil agriculture. In addition, since livestock production is treated as an independent component of the local farming system, livestock should be considered as the fourth category. On the other hand, the fishing industry currently exploits almost the entire coast. However, in the future, this sector should substantially diversify by exploring offshore fisheries and developing aquaculture potential in the outlying islands. Therefore, the Team established three categories for the fishery sector—coastal fishery, offshore fishery, and aquaculture.

The second dimension refers to the types of development intervention that are employed, such as improved production technology, infrastructure development, institutional strengthening, etc. The Project established two broad segments of intervention: improvement of producer's income and institutional development. The former is further divided into (i) stable supply of inputs (ii) improvement of production technology (iii) improvement of marketing and (iv) improvement of infrastructure. Institutional development is subdivided into strengthening CBOs and strengthening public service providers.

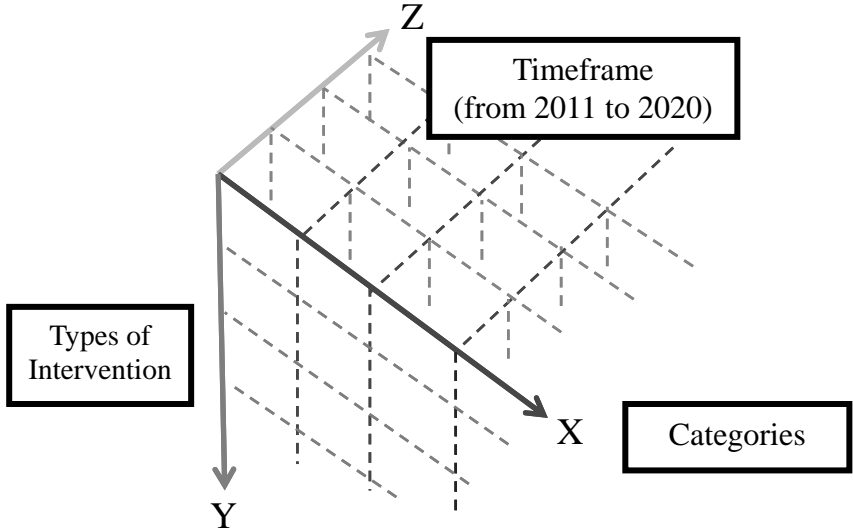
The third dimension is temporal or a timeframe, which is usually divided into the three segments of short-term (5-6 years), mid-term (10 years) and long-term (over 10 years) in development planning. Here, short-term is further divided into immediate (2 years) and short-term (3-4 years) in order to emphasize the importance of actions in the immediate future.

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<sup>1</sup> The process explained here is more relevant to the agriculture and fisheries sectors than to community development. This is because the former is economic sectors while the latter is social sector.



These three dimensions constitute the framework for constructing the Road Maps. This can be schematized as shown in the following figure. The X axis represents the categories, the Y axis the type of intervention and the Z axis the timeframe. Concrete development actions required in each category will be allocated to the individual boxes created by these three axes.



**Figure 1- 3: Three Axes for Constructing the Roadmaps  
Categories, Intervention Types, and Timeframe**

For the formulation of a regional development plan and Road Maps, the following aspects were taken into consideration:

- They must reflect the outcomes and experience of QIPP and the Pilot Projects.
- They must examine not only objectives and goals but also the processes for attaining them.
- They must examine the role of CBOs such as FO, FCS, and WRDS.
- They must strike a balance between a bottom-up approach from communities and a sector-wide approach.
- They must reflect the results of discussion at the two Development Workshops held in February and July 2011.
- They must be accompanied by concrete project plans that are considered vital for the next ten years.

**1.8 The Significance of Pilot Projects**

Immediately after the initiation of field activities in April 2010, the Team endeavored to identify meaningful pilot projects through every available opportunity, including the District Forum of the concerned departments at the GA office and donor meetings at Jaffna’s UNDP and NGO gatherings. The Team also encouraged the leaders of FOs, FCSes, and other CBOs to provide the Team with their ideas regarding useful pilot projects. Section 7.2 in Chapter 7 elaborates the actual process of formulating the Pilot Projects.

As a result, PDP Jaffna has implemented 17 pilot projects - 6 in agriculture, 6 in fisheries, and 5 in community development. The details of the individual projects are presented in Chapters 7 and 8.

The Pilot Projects provided not only test grounds for new technology but also opportunities to gauge the capacity level of concerned CBOs and public service providers and to plan effective measures for their improvement. Lessons learned through the implementation of the Pilot Projects are reflected in the Road Maps. Chapters 8 and 9 present a detailed report on the implementation and evaluation of the pilot projects.

## **1.9 Quick Impact Pilot Projects and Infrastructure Rehabilitation Component**

In the meantime, soon after its assignment to the field in April 2010, the Team also began implementing the rehabilitation of seven minor irrigation tanks in Chavakachcheri, Kopay, Chankani, Tellippallai, and Velanai DS Divisions and two fishing jetties in Kakathivu and Navanthurai. They are named the Quick Impact Pilot Project (QIPP). The construction work of QIPP was successfully completed in December 2010. Subsequently, JICA handed the renovated tanks over to DAD on 15 December 2010. The seven FOs, which benefited directly, are responsible for the maintenance of the renovated tanks in the future. These tanks are expected to increase the water storage capacity to 45,742m<sup>2</sup>, thereby benefitting 350 farmers. JICA also formally handed over the Kakathivu Jetty and the Navanthurai Jetty to DFAR on December 19, 2010. The eight FCSes using the Kakathivu and Navanthurai jetties are now responsible for their maintenance. The two jetties are expected to directly benefit 1,269 fishermen. A detailed report on the QIPP is presented in Chapter 6.

Following the completion of the QIPP, PDP Jaffna has also successfully completed the rehabilitation of the central coconut nursery operated by the Coconut Cultivation Board (CCB) and the reconstruction of the College of Fisheries under the Ministry of Youth Affairs. These were undertaken as Infrastructure Rehabilitation Component (IRC) of the pilot projects AC-5 and FC-6. Chapter 7 and the Appendix present details of the IRC.

## **1.10 Structure of the Final Report**

This Final Report contains nine chapters. Chapter 1 describes the fundamentals of PDP Jaffna. While Chapter 2 provides the outline and basic facts of the district, Chapters 3 and 4 focus on the agriculture and the fisheries sector, respectively. Chapter 5 summarizes a set of basic concepts and principal policy guidelines that are relevant in formulating the Road Maps. Chapter 6 is devoted to a report on the QIPP while the following two chapters, Chapters 7 and 8, present details on the implementation and evaluation of the Pilot Projects. Finally, Chapter 9 proposes the Road Maps toward 2020 and beyond.

Since many associated reports, documents, records and data are too extensive to be included in the main report, they have been compiled in a separate book of Appendixes.

Important documents related to the committees and workshops of the Project are listed in Appendix 1-1. The equipment procured for project activities is listed in Table in Appendix 1-2, with the description and number of all equipment and the relevant organizations to which the equipment was handed over. Further, articles on the Project, which appeared occasionally in the national as well as local media, are listed in Appendix 1-3. The list mentions the posted date and information source of the articles. Some of them were responses to press releases issued by the JICA Sri Lanka Office.

### **1.11 Constraints of the Final Report**

It should be noted that the last official census taken in Jaffna District was conducted in 1981 and the new census is underway in 2011; the results of the 2011 census are not available at the time of writing this report. All the figures used by the respective departments are their own estimates calculated on the basis of primary data collection or random sampling. This creates considerable room for estimation errors and inconsistency. Readers of this report must keep this limitation in mind.



# **Chapter 2**

## **Overview of Jaffna**

## **Chapter 2 Overview of Jaffna**

### **2.1 Natural Geography**

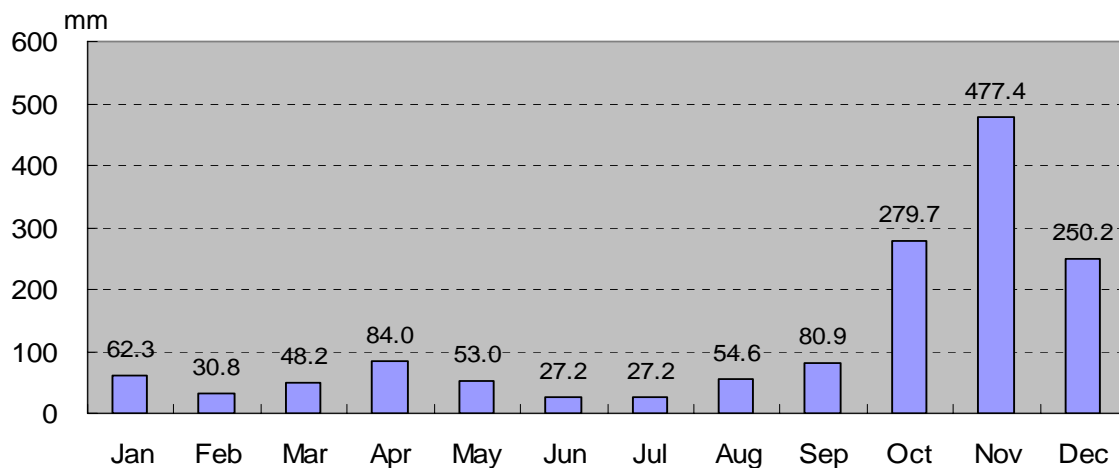
Jaffna Peninsula is located in the northernmost region of Sri Lanka and is separated from India by the Palk Strait. Jaffna District consists of this peninsula and seven inhabited islands, being connected to the mainland Sri Lanka by a narrow strip of land called Elephant Pass.

The total land area including inland water bodies is 1,025km<sup>2</sup>. The land is largely flat and low, with an average elevation of 5 m above sea level; however, the central part of the western sector in the area around Thellipalai has an elevation of up to 10.5m above sea level. There are more than 600 tanks and 2,000 smaller ditches scattered all over the district.

The district also has a large area of swampy wasteland. Excess rainwater drains quickly into the sea though the swampy areas flood like large lakes. The soil and water resources of Jaffna Peninsula are related to its limestone geology. The soil is formed by the effects of water and wind on limestone and various sediments that have washed in from the sea. The limestone, which is porous, is the source of groundwater there. Due to lack of surface water such as rivers and freshwater lakes, the district is unique within the country for its sole dependence on underground water for drinking, agricultural, and industrial uses. Paddy cultivation is rain fed, but only for three months during the Northeast Monsoon. The issues concerning groundwater is discussed further in section 2.6 'Environmental Issues.'

Jaffna is located in the dry zone; the island area of the district is particularly dry. In 2009, Jaffna recorded only 59 annual rainy days, which was the least among 20 major cities in Sri Lanka. The maximum precipitation occurs from October to December during the northeast Monsoon although some showers are also observed from April to May. The total annual precipitation was 1,812mm in 2008, which is relatively high compared with the regions average of 1,231mm from 1971 to 2000. The Figure below indicates the average monthly rainfall from 2001 through 2008.

During the October-November inter-monsoon season, cyclones forming in the South Bay of Bengal and the South Arabian Sea also hit the district. Groundwater recharge in the region depends solely on rainfall, particularly during the rainy season. It is estimated that about 30% of the district's rainfall becomes groundwater.



**Figure 2- 1: Monthly Rainfall in Jaffna (2001–2008)**

The temperature ranges from 26°C to 33°C in Jaffna, and the average temperature is 28°C, which is the highest in the country. Dryness causes extreme temperatures during the southwest monsoon and the heat wave of India affects the area during the months of April and May. In the months of April - May and August - September, when the sun is overhead, the temperature stands at maximum. The coolest period occurs in December - January coinciding with the lowest sun.

The soil found in Jaffna belongs to the following three major soil groups: they are Calcic Red-yellow latosols, Solodized solonetz and solon chaks, and Regosols. Chapter 3 discusses soils in Jaffna in details.

## 2.2 Brief Historical Background

Jaffna has a history of more than 2000 years of inhabitation. For centuries, Jaffna City (or *Yarl*) has been Sri Lanka's Hindu-Tamil cultural and religious centre.

Jaffna District occupies the land that constituted the pre-colonial Jaffna kingdom. Important Hindu temples such as Nallur Kanthaswamy temple and Buddhist Nagadweepa Vihara are located in the district. In August every year, the Hindu festival in the Nallur Temple attracts a huge number of Sri Lankan Tamils living abroad for its high spiritual values.

The Jaffna Kingdom, known as *Arya Chakravarthi* Dynasty, did cover the area of the present Northern Province which consisted of Jaffna Peninsula and Vanni area, or of the five districts: Jaffna, Kilinochchi, Mullaitive, Mannar and Vavuniya.<sup>1</sup>

At the time that Sri Lanka gained independence, Jaffna was one of the three districts in Northern Province. Parts of the district were transferred to newly created Mullaitivu District in September 1978. Also, Kilinochchi District was carved out of the southern part of Jaffna District in February 1984.

<sup>1</sup> Source: The Kingdom of Jaffna by S. Pathmanathan. 1978. A History of Sri Lanka by Professor K.M.de Silva, 2005



The majority of the Sri Lankan Tamils, including those who achieved successes in their career or in business in Colombo or abroad, consider that their origin is in Jaffna and as well in India. The culture of *Vellalars*, who had been migrated from India as agro pastoral warrior clan and have protected and served the Hindu temples, is dominant in Jaffna tradition as songs, dramas, and dances of the festivals in the temples.

Major part of Sri Lankan Tamils think that they belong to *Vellalars*, who were originally agricultural landlords in Tamil Nadu, Kerala states in India and in Sri Lanka; they were the nobility, aristocracy of the ancient Tamil order and had close relations with the different royal dynasties and thus *Vellalars* culture or Jaffna Tamil Culture. This sense of common identity ties Tamils in abroad, in other areas of Sri Lanka and in Jaffna.<sup>2</sup>

Throughout its history, Jaffna experienced several types of local governance. However, with the impact of colonization by Western powers, it suffered under the Portuguese and Dutch occupations of the 17th and 18th centuries.

In 1620, the Portuguese captured Jaffna's King Sangli and systematically demolished Hindu temples in the city. A substantial wave of mass Christian conversions followed - resulting in the building of many beautiful churches. Many Hindu temples were not rebuilt until the mid-19th century. In 1658, the city surrendered to the Dutch after a bitter three-month siege. Various Portuguese and Dutch fortifications remain dotted around the peninsula, but most are ruined now.

In 1795, the British took over Jaffna. It is widely considered that this development sowed the seeds of future interethnic unrest by treating the Jaffna Tamils differently from the other social groups in Sri Lanka.

After the total independence of the island in 1948, there have been different claims by Tamils and Sinhalese about the pre-colonial status of the region, leading to several disputes. The failure of democratic solutions to these disputes resulted in armed conflicts between the government and several Tamil militant groups who demanded a separate state.

The actual separatist conflict started in July 1983 with a guerrilla attack by Liberation Tigers of Tamil Eelam (LTTE), one of the Tamil militant groups, on the Sri Lankan army at Thrunelveli in Jaffna. This was followed by an anti-Tamil riot in Colombo and other parts of the country. The conflict in Sri Lanka can be divided into four phases: Eelam War I between 1983 and 1987; Eelam War II between 1990 and 1994; Eelam War III from 1995 to 2001; and Eelam War IV from 2006 to 2009.

Although several Tamil militant groups fought for a separate state, all groups except LTTE officially surrendered their arms in 1987 according to the peace accord facilitated and implemented by the Indian

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<sup>2</sup> Source: The Exile Returned ; a self-portrait of Tamil Vellalars of Jaffna, Sri Lanka" by S.R.H.Hoole

government. However, this peace accord did not achieve its goals for several reasons, and LTTE fought the Indian army and continued to fight against government troops after the withdrawal of Indian forces in 1990.

Just before the resumption of the conflict in 1990, LTTE gained control of Jaffna Peninsula, marking the first time LTTE was able to bring the densely populated areas of Jaffna and Mannar Island under its full control. This was achieved by eliminating the top and mid-level leadership of other Tamil armed groups from the region. With Vanni already under its control, taking control of Jaffna gave LTTE sway over virtually the entire Northern Province except for a large part of the Vavuniya District. LTTE forced the Muslim population out of Jaffna, although some have now returned to the city. Although the conflict started in 1983, the economy of the region only began to experience a dramatic decline after 1990.

The city has been retaken by government forces and has been officially held by the government since 1995, but LTTE wielded considerable power during the period they controlled the region. In fact, they were able to extract taxes from many Jaffna citizens, ostensibly forcing them to pay taxes twice: once to the government and once to them. In 1996 government forces claimed to have taken the last rebel stronghold on the peninsula, but Tamil insurgents continued their fight from jungle bases, retaking much of the peninsula by early 2000.

In the sudden peace created by the 2002 Ceasefire Agreement, Jaffna experienced a period of relative calm and relaxation. After many hardships and several failed efforts to negotiate a settlement, the conflict came to an end when the militarily physically eradicated LTTE from Sri Lankan soil in May 2009. Jaffna had survived despite large amounts of human and collateral damages and a crippling economic blockade. As a result of the conflict, many of the district's inhabitants chose emigration, leaving the region with a smaller population than before.

The worst disaster in recent Jaffna history was the tsunami on 26 December 2004 that killed over 3,000 people in Jaffna District.

Along the process of stabilization, on the streets of Jaffna, many cheap commodities including clothes, kitchenware, etc. from south India are found and young generation enjoy the music or movies from India. The majority of the residents still find historically and culturally closer tie with South India than with Colombo. Needless to say the language plays the important role in this tie.<sup>3</sup>

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<sup>3</sup> Source: Conflict and Development: Roles of JBIC-Development Assistance Strategy for Peace Building and Reconstruction in Sri Lanka, 2003, JBIC Research Paper No.24

**Table 2- 1: Brief history of Jaffna District**

1215	The Jaffna kingdom came into existence.
1620	The Portuguese captured Jaffna's King.
1658	Jaffna city surrendered to the Dutch after a bitter three-month siege.
1795	The British took over Jaffna.
1948	Jaffna was one of the three districts in the north when independence of the island was
1978	Parts of the district were transferred to newly created Mullaitivu District.
Jul. 1983	The armed conflict was started with the guerrilla attack by Liberation Tigers of Tamil Eelam (LTTE) on the Sri Lankan army in Jaffna, which was followed by an anti-Tamil riot in Colombo and other parts of the country.
1987	The Indo-Sri Lanka Peace Accord was signed and the Sri Lankan Government accepted the devolution of power to the provinces as the 13th Amendment to the Constitution of Sri Lanka. India agreed to send the Indian Peace Keeping Force. (The Northern and the Eastern provinces merged into a single province).
1990	Indian troops began to be withdrawn.
1990	LTTE gained control of Jaffna Peninsula, marking the first time LTTE was able to bring the densely populated areas of Jaffna and Mannar Island under its full control.
1995	Jaffna has been retaken by government forces and has been officially held by the
Feb. 2002	The ceasefire agreement between the Sri Lankan Government and the LTTE was signed.
Dec. 2004	Tsunami, the worst disaster in recent Jaffna history attacked the Eastern coast.
Aug. 2006	The war started again in the north and the A9 Highway was closed to bring isolation of
Jan. 2008	The Government formally announced its withdrawal from the Ceasefire Agreement.
18 <sup>th</sup> May 2009	The armed conflict was over with the clearance of Vanni area by SLA.

## 2.3 Population

### 2.3.1 General Trend in Population

The total population of Jaffna, which was 625,761, in April 2010,<sup>4</sup> was larger than the combined total populations of the four other districts in Northern Province. The population density in Jaffna was the highest in the province (658 person/sq.km), while the second highest was the Kilinochchi District (129 person/km<sup>2</sup>) and the Mannar District marked the lowest (55 person/km<sup>2</sup>).<sup>5</sup>

The total population of Jaffna District indicated a trend of increase since 2001, except 2006. However, it also revealed a considerable decline from the figure of about 738,800 from 1981,<sup>6</sup> which was prior to the outbreak of the separatist conflict. Noticeable population decreases have been observed in Velanai, Tellipalai, and Maruthankerney (47%, 37% and 56%, respectively) between 1981 and 2010. These figures revealed population movement on a massive scale in recent years. Urban areas accounted for 20% of the total population and were sprawling because of the population increase. The figure below shows the trend of DS Division-wise population from 1981 to 2010.

<sup>4</sup> Project Director of Rehabilitation Secretariat, GA Office

<sup>5</sup> Economic and Social Statistics of Sri Lanka 2011, Central Bank

<sup>6</sup> Economic and Social Statistics of Sri Lanka 2011, Central Bank

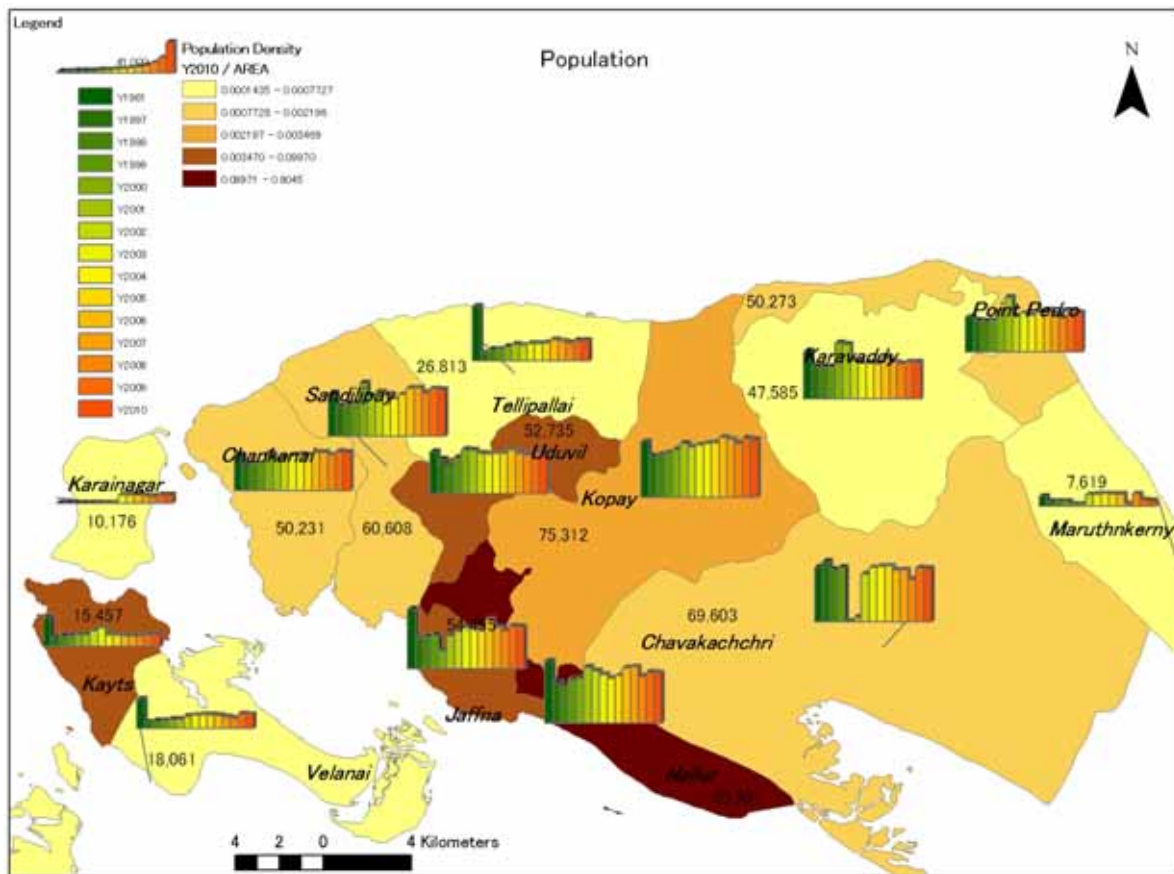


Figure 2- 2: Map of DS Division-wise Population from 1981 to 2010<sup>7</sup>

The district was controlled by LTTE from 1990 to 1995 and there was a major military operation in Jaffna in 1995. When LTTE withdrew from Jaffna to Vanni in late 1995, there was also a mass movement of people from Jaffna to Vanni, which resulted in a decrease of the total population in the district. By 1997, people started to move back to Jaffna from Vanni when the situation had started to settle to some extent. When LTTE tried to recapture Jaffna Peninsula in May 2000, Chavakachcheri, Maruthankerny, and some parts of other Jaffna DS Divisions came under heavy attack and people moved to other divisions such as Chankanaai, Sandilippai, Uduvil, and Kopay. The population of the district increased slightly until 2006. However, when the conflict began again in 2006, people in Maruthankerny were displaced owing to the region's close proximity to the border of areas controlled by LTTE and the military.

The total number of farm families in the district was 65,411 in 2008.<sup>8</sup> Many of the farm families were located in Kopay (12,650) and Chavakachcheri (12,544). The total number of fishing families in the district was 11,394 in 2008. Many of the fishing families were located in Jaffna (3,485), followed by Point Pedro (3,045). The figure below shows the DS Division-wise agriculture and fishing population in the district.

<sup>7</sup> Director of Planning, GA Office

<sup>8</sup> Jaffna District Statistical Information 2009

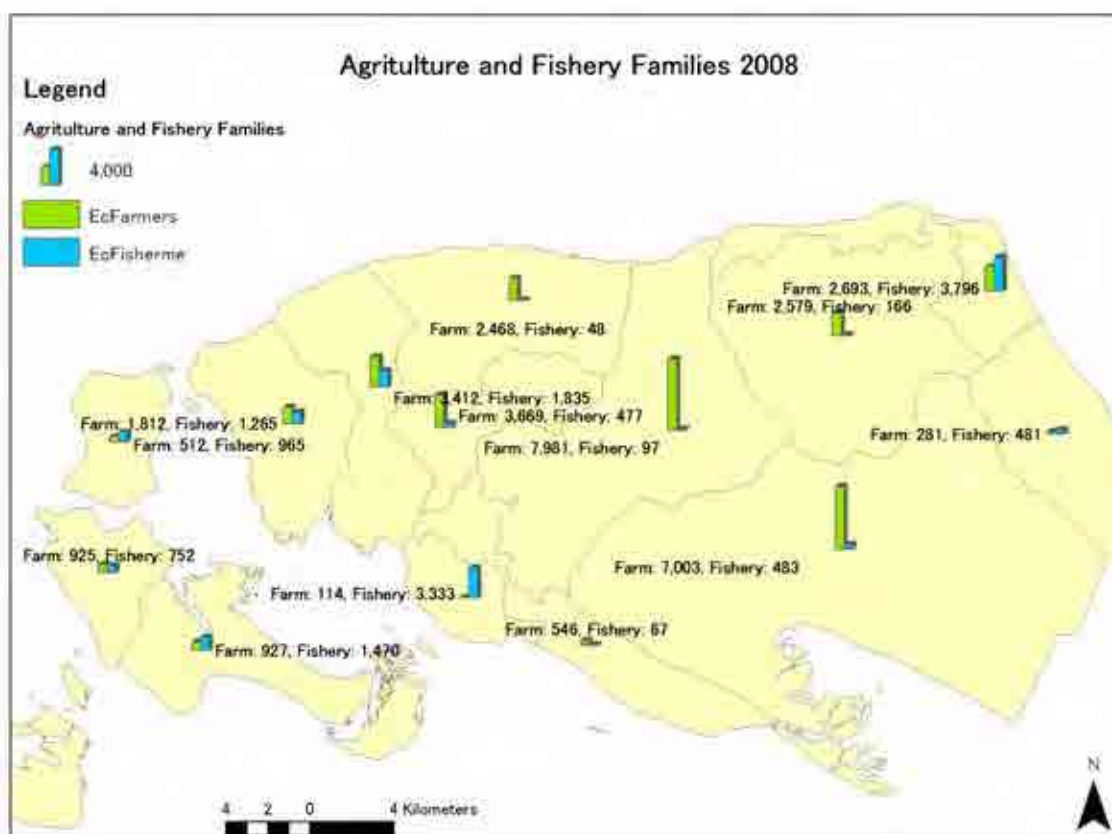


Figure 2- 3: Map of DS Division-wise Agriculture and Fishing Population<sup>9</sup>

### 2.3.2 Internally Displaced Persons (IDPs) / Returnees<sup>10</sup>

#### (1) The Current Situation

Due to the three-decade long conflict, Jaffna District witnessed several displacements, which resulted in a large number of IDPs as well as refugees and migrants going abroad. The IDPs can be categorised into new IDPs and old IDPs. New IDPs are defined as IDPs who were displaced after the recurrence of internal conflict in August 2006, although they also include people from Jaffna who lived in Vanni before that time. Old IDPs are defined as IDPs who were displaced from their homeland before August 2006. Many of their homelands were designated as HSZ after their displacement. Since the end of internal conflict in May 2009, a large number of IDPs returned to Jaffna District in various ways. Table 2-2 shows the patterns of IDP return.

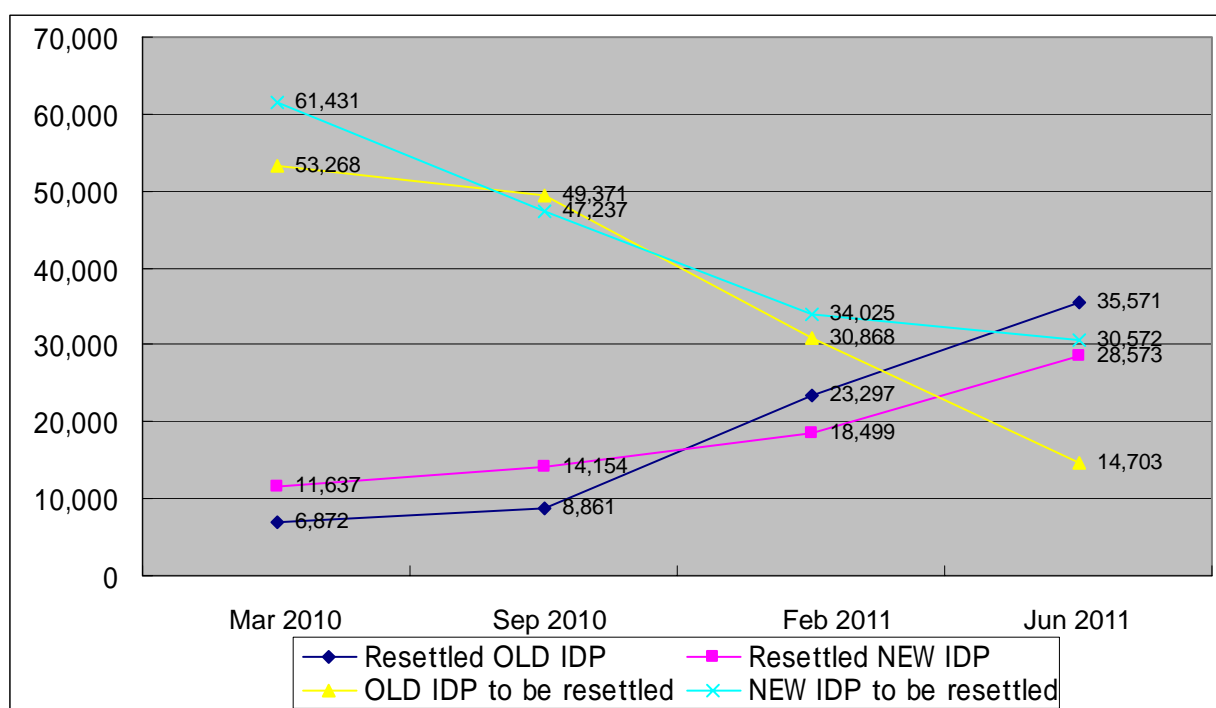
<sup>9</sup> Jaffna District Statistical Information 2009

<sup>10</sup> UNHCR defines IDPs as "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or human-made disasters, and who have not crossed an internationally recognized State border (Reach Out Refugee Protection Training Project)". The Team defines Returnees as "persons who have returned to their places of origins and would no longer be categorized as IDPs". However, the Team uses the terms "resettled new IDPs" and "resettled old IDPs" when distinguishing the status of IDPs

**Table 2- 2: Patterns of IDP Return in Jaffna**

Categories of IDPs	Return Patterns
New IDPs (Displaced after August 2006)	<ul style="list-style-type: none"> <li>- Assisted return from Vanni IDP Welfare Centre in Vavuniya</li> <li>- Voluntary return from Vanni IDP Welfare Centre or other places in Vavuniya via other district(s)</li> <li>- Assisted return from Vanni IDP Welfare Centre in Jaffna</li> <li>- Return to friend's/relative's house or rented house in Jaffna after evacuating from Vanni</li> </ul>
Old IDPs (Displaced before August 2006)	<ul style="list-style-type: none"> <li>- Return from friend's/relative's house or rented house in Jaffna after release of HSZ</li> <li>- Return from friend's/relative's house or rented house in other district after release of HSZ</li> <li>- Return from IDP Welfare Centre in Jaffna</li> </ul>

Figure 2-4 shows the progress of IDP return and resettlement.



**Figure 2- 4: Resettlement of New and Old IDPs from March 2010 to June 2011<sup>11</sup>**

In June 2011, 64,144 individuals returned to their homelands while 45,275 other individuals are still living with their friends/relatives, in rented houses, or in IDP Welfare Centres.<sup>12</sup> Figure 2-4 shows the rapid increase of resettlement since September 2010, especially for old IDPs after the release of HSZ and demining operations. The figure is estimated from statistics based on the registration of returnees at the GN Divisions. In the field, meanwhile, a number of returnees were facing difficulty of resettlement, including lack of infrastructure and public services in newly released areas. Some of the returnees to the former HSZ seemed not to live in their original places but lived in rented houses or with friends/relatives

<sup>11</sup> District Secretariat Jaffna, "Population of Jaffna District as at 31.03.2010, 30.09.2010, 31.01.2011, and 31.05.2011" and "Resettlement and Release Status in Jaffna District up to 31.03.2010, 20.09.2010, 11.02.2011, and 09.06.2011".

<sup>12</sup> The Welfare Centres in Jaffna were said to be closed as of July 2011.



continually, although they registered as resettled returnees. In addition to these IDPs and returnees, approximately 100,000 Sri Lankan refugees, including those from Jaffna, are estimated to live in foreign countries.

## (2) Issues

The Team conducted a brief survey on new IDPs in March to April 2011 in some of the target communities of the pilot projects. Even though the survey targeted new IDPs as respondents, there was a certain number of people who used to be old IDPs as well. 95 samples were selected based on the stratum-extraction method.<sup>13</sup> The survey questions covered living conditions, livelihood, assistance, and diseases.

### **Living Conditions**

The major issue for new IDPs was resettlement or housing. Even though the resettlement process in Jaffna District has made considerable progress in the last years, more than 45,000 individuals still need to be resettled. As previously mentioned, some of the returnees do not live at their original locations.

92% of the respondents answered that they planned to move out of their current residences. The Team speculated that even though 41% of the respondents owned their own land, the majority of them wished to move out of their current residences because they also possessed land and properties in Vanni. It was supposed that they wished to go to Vanni to benefit from the resettlement assistance there. Another reason could be that the respondents' livelihood activities and assets existed in Vanni or Maruthankerny. The respondents often mentioned that they planned to move to Vanni, Maruthankerny, or Tellippalai.

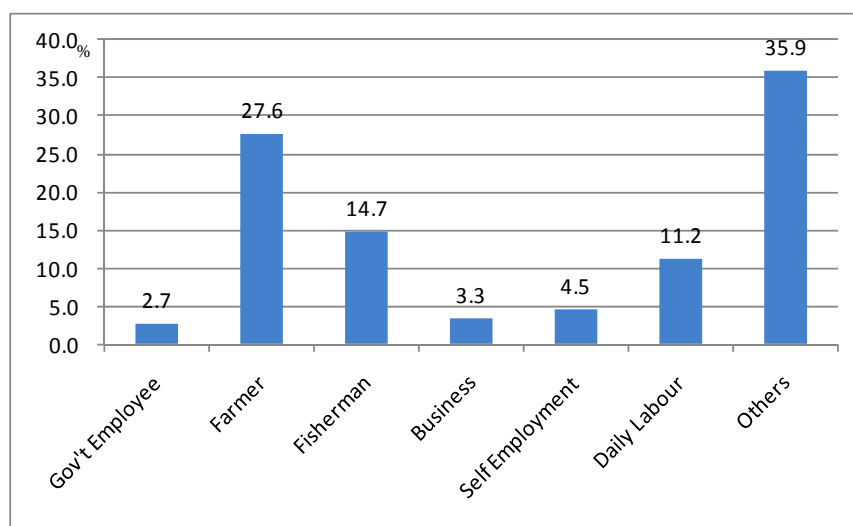
Furthermore, they said that they faced a lot of social problems, such as disputes with the land or house owner, inability to maintain their privacy, and difficulties in sharing limited facilities such as toilets or wells, as they were living with others or others' houses or land.

### **Livelihood**

The new IDPs also faced severe livelihood challenges. Many engaged in agriculture, fishing, or daily labour. The figure below shows the ratio of occupation for new IDPs as of May 2010. Whereas "others," such as carpenter, mason, tailor, and so on, accounted for the most (35.9%) among 29,538 working individuals, the second highest was "farmer (27.6%)" followed by "fisherman (14.7%)."

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<sup>13</sup> Because of time limitations, the survey could not cover the entire target GN Division of the Pilot Projects. Therefore, a two-stage extraction method was adopted; first was to select the target GN Divisions which had higher percentage of IDPs (more than 20% of total population), and second to select the samples according to the percentage of the GN Divisions.



**Figure 2- 5: Ratio of Occupation for new IDPs as of May 2010<sup>14</sup>**

Most lost all the assets they had once owned, including land, vehicles/motorcycles/bicycles, and livelihood-related equipment (axes, hoes, water pumps, fishing nets, fishing boats, etc). As per the information from the Team's survey, 13% of the IDP families for both respondent and respondent's family member were not involved in any livelihood activities. 48% of the IDP families for both respondent and respondent's family member had income less than LKR 2,000 per month.<sup>15</sup> One possible explanation was that they had been displaced from one place to another since 1990, especially the old IDPs displaced from Tellippalai DS Division. Therefore, in the past they had no income and lived with the food ration. The daily labours tended to involve several types of work, which were available day by day. For example, one man was involved as an agro labourer, while on another day he worked for fencing of the farming land, and another day he worked for loading goods from a lorry. Lack of cultivation lands, lack of fishing gear, and lack of capital to start small businesses were some of the factors limiting the IDPs' engagement in permanent livelihood activities. As per the findings of the survey, 18% of IDPs interviewed received support for livelihood activities. The majority (82%) of respondents showed their willingness to work. The affiliation of CBOs was not so high (36%), because of their plans for resettlement, difficulties in obtaining membership due to legal reasons, and lack of time.

### **Assistance**

99% of the interviewed IDPs received food dry ration assistance and that was the main source for their living. Food rations were provided monthly based on the number of family members. The food ration was stopped to the new IDPs who returned or displaced from Vanni and other districts. They were given food ration for nine months and given LKR 50,000 as resettlement allowance together with some Non-Food Ration Items (a package contained some essential items such as tarpaulin sheets, pots and pans, knives, *mammoty*,<sup>16</sup> and so on). Food rations are currently provided only to the IDP families which were displaced within Jaffna District from some villages in Tellippalai and Maruthankerny DS Divisions and have not yet resettled.

<sup>14</sup> Office of the Project Director for Resettlement, GA Office. *Resettlement and Release Status in Jaffna District*. (Unpublished documents compiled by the Team).

<sup>15</sup> 93% of them had more than one member in the family.

<sup>16</sup> Mammoty means a hoe.

**Diseases**

Many lost their families, relatives, or friends during the conflict. From the observation of the interviewer, 16% of respondents were expected to have psychological disorders or diseases. One man from an IDP camp expressed that he had to leave his injured father behind to save the lives of his remaining family members and himself. Another man’s granddaughter was shot to death behind his back. Mental and physical disorders may occur among these individuals, and grave hardship was expected to continue for some time before their self-esteem and trust in neighbours would return.

(3) Needs

The survey analysis shows key differences among the IDPs/returnees, which can be categorized according to vulnerability. Since the survey revealed that old IDPs can be included in new IDPs, the Team analyzes their possible needs based on the current situation.

**Table 2- 3: Current Situation and Possible Needs of IDPs/returnees**

Categories	Current Situation	Possible needs
Most Vulnerable	<ul style="list-style-type: none"> <li>- No income</li> <li>- No job</li> <li>- Living on other’s land</li> </ul>	<ul style="list-style-type: none"> <li>- Food ration, welfare support</li> <li>- Housing assistance</li> <li>- Livelihood support for temporary job</li> <li>- Psychosocial care</li> <li>- Social support through religious groups</li> </ul>
Vulnerable	<ul style="list-style-type: none"> <li>- Less income</li> <li>- Engaged in temporary job</li> <li>- Living on own/relative’s land</li> </ul>	<ul style="list-style-type: none"> <li>- Livelihood support for permanent job</li> <li>- Housing assistance if living at temporary shelter or temporary place</li> <li>- Connection with CBOs for livelihood assistance</li> </ul>
Relatively Fair	<ul style="list-style-type: none"> <li>- Having regular income</li> <li>- Living at permanent houses on own land</li> </ul>	<ul style="list-style-type: none"> <li>- Active role in CBOs</li> <li>- Leader development</li> <li>- Access to microfinance</li> <li>- Support in marketing</li> </ul>

The “most vulnerable” IDPs is likely those with no income, those who cannot work, and those living on other’s land. It consisted about 5% of respondents. Their needs were identified as food ration, welfare support, housing assistance, support for temporary job, psychosocial care, and other social supports. The “vulnerable” category had less income, those who were engaged in temporary jobs, and were living on their own/their relatives’ land. It consisted about 82% of respondents. They required permanent jobs, housing assistance if living at temporary shelters, and connection with CBOs. The last category is the “relatively fair,” who currently have regular income and thus also the potential to develop business and lead society. It consisted about 13% of respondents. They were living in permanent houses on their own land or own house provided by donors or the government. Many of them were assumed to be returnees, but some may be IDPs from other areas. They required an active role in CBOs, leader development, access to microfinance, and support in marketing.

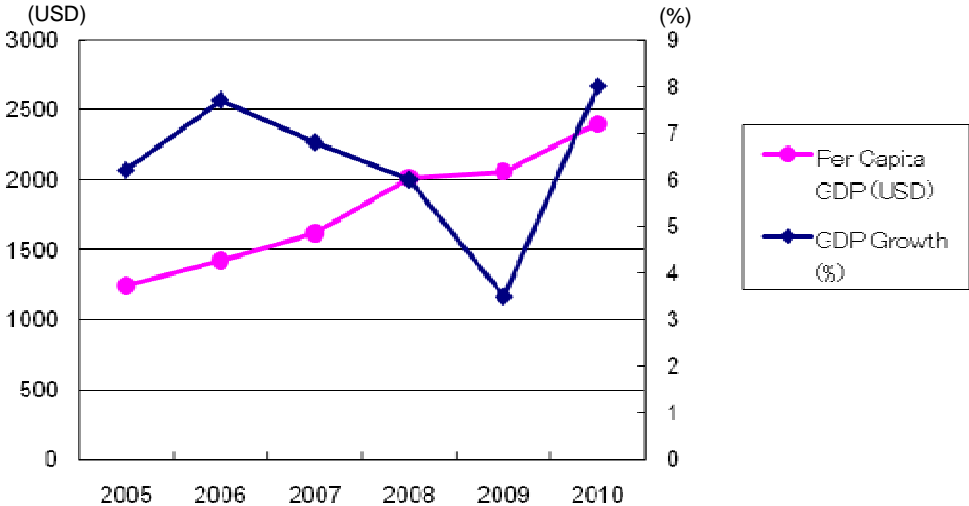
**2.4 Economy**

**2.4.1 Macro-economy**

Sri Lanka’s gross domestic products (GDP) grew by an energetic 8% in 2010 from a low growth of 3.5% resulted from the global economic crisis in 2008. The 8% growth was the highest rate in the last 30 years and the second highest since its independence. As a consequence, with a population a little over 20 million, Sri Lanka is now at the lower level of the middle-income countries with a per capita GDP of USD 2,399 in 2010. Sri Lanka’s poverty rate, which accounted for 15.2% of the population in 2006, declined to 7.6% in 2010.

**Table 2- 4: GDP Growth in Sri Lanka**

	2005	2006	2007	2008	2009	2010
GDP Growth (%)	6.2	7.7	6.8	6	3.5	8
Per Capita GDP (USD)	1,241	1,421	1,617	2,014	2,057	2,399



**Figure 2- 6: GDP Growth in Sri Lanka**

The President’s Statement for the 2011 Budget mentioned that although its economy took over 25 years (from 1977 to 2004) to increase its per capita income from USD 300 to USD 1,000, it took only five more years to double that figure despite several adversities such as the conflict, the tsunami in 2004, and the global economic crisis in 2008. The improved domestic business climate, the upturn in domestic and external demand, and gradually improving infrastructure enabled the industry sector increased by 8%. The tertiary industry, which accounts for nearly 60% of Sri Lanka’s GDP, recorded a growth of 7.6%. This was mainly due to the expansion of wholesale and retail trade, revival in tourism which contributed to robust performance in hotels and restaurants, and the impressive performance of the banking, insurance, and real estate subsector. Tourist arrivals leaped by a staggering 46% to 654,477 in 2010, the highest number on record. Northern Province and Eastern Province also significantly contributed to the national economic growth; the revival of paddy and fisheries production in the former conflict areas of Northern and Eastern provinces made agriculture grew at 6.5% in 2010. The Central Bank of Sri Lanka forecasts that this high economic growth will continue for the next few years.

The Asian Development Bank (ADB) in its report on Outlook for 2011 states that the economy of Sri Lanka bounced back strongly in 2010, reflecting post conflict optimism and the global economic recovery. It says that outlook will remain positive for healthy growth, provided that the fiscal consolidation process meets targets and the burgeoning inflation pressures are addressed.

With all positive macro-economic indicators, including the upgrading to Sri Lanka’s rating standards by the three major international rating agencies in September 2010 and the on-going boom in the Colombo stock market, GOSL set an ambitious plan to raise the per capita income to around USD 4,000 by 2016 and become one of emerging economies in Asia. The 8% growth must be sustained for the next six years to realize this goal. It appears that, as far as 2011 is concerned, the target will be certainly achieved.

Sri Lanka was once a typical ‘agro-export’ economy at the time of its independence, with the agriculture sector contributing to 60% of its GDP. Sri Lanka’s foreign exchange earnings had depended primarily on three main products: tea, rubber, and coconut. In contrast to the economic picture in the 1950s, the country’s situation has now drastically changed and its sectoral composition is akin to that of an advanced economy in which the service sector leads the economy.

**Table 2- 5: Contribution to GDP by Sector**

	1950	2010
Agriculture Sector	50.1%	11.9%
Industry Sector	11.2%	28.1%
Service Sector	38.7%	60.0%

However, it is also a sobering fact in Sri Lanka that considerable regional economic disparities exist. The nine provinces in Sri Lanka can be categorized into four broad groups - high, medium, low, and very low in terms of their contribution to the national economy. The only province belonging to the high category is the Western Province, which accounts for as much as 45.1% of the national GDP in 2009. There are three provinces, Central Province, North-western Province, and Southern Province, in the medium category, contributing 8%-12% each. Another four provinces - Eastern Province, Sabragamuwa Province, Uva Province and North Central Province - contribute 4%-8% each; they are classified into the low category. Finally, Northern Province, which holds 5.8% of the total Sri Lankan population, contributes only 3.3%, so this is categorized into the very low.

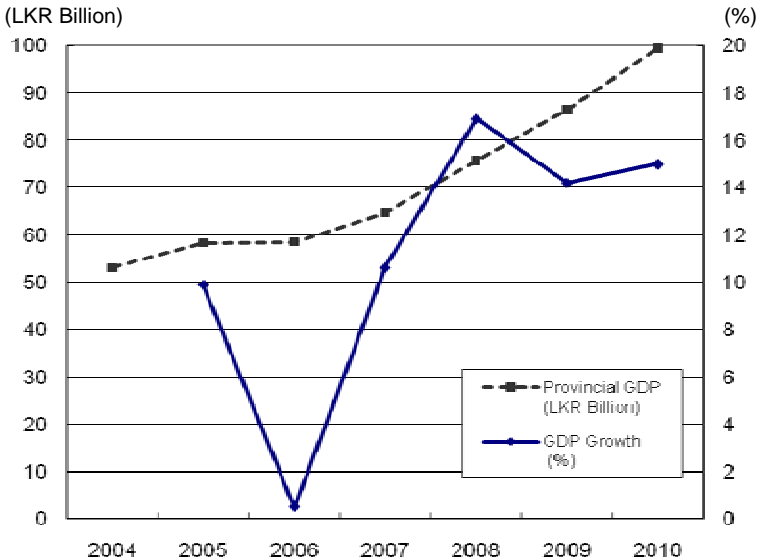
As discussed above, the Sri Lankan economy has undergone a structural transformation from a predominantly agrarian economy to a service-oriented economy over the past three decades. However, as far as Northern Province is concerned, the share of the primary industry within the Province GDP has not declined and kept over 20% in the 2000s. While the rest of the country has been going through a modernization of their economic structure, Northern Province has remained unchanged or even appeared moving backward during the past two decades.

The eighteen months has passed since the end of the fighting, and evidence of remarkable post-conflict economic growth is now seen in every corner of Northern Province, although it is largely dependent on the relief and rehabilitation activities of GOSL and donors. The latest economic report of the Central Bank of Sri Lanka indicates that Northern Province recorded a provincial nominal GDP growth rate of 14.2% in 2009, the second highest in Sri Lanka only after 14.4% registered in the Eastern Province. For instance, paddy production of the province has increased by 70% from 65,400 tons in 2009 to 110,600 tons 2010, and at the present speed of recovery, it is foreseen that paddy cultivation areas will increase at least to 50,000ha with massive harvest of more than 200,000 tons in 2011.

The economic performance of Northern Province is expected to have improved further in 2010 as peace prevailed during the entire year of 2010. As a result of this economic growth in Northern Province which is much stronger than that of the country as a whole, the contribution to the national GDP by Northern Province has increased to 3.3% in 2009 from 2.8% in 2006. The table below is constructed by the Team based on national and provincial GDPs compiled in *Economic and Social Statistics of Sri Lanka 2011*.

**Table 2- 6: Provincial GDP Growth**

	2004	2005	2006	2007	2008	2009	2010
Provincial GDP (LKR billion)	53.0	58.3	58.5	64.7	75.7	86.4	99.4
GDP Growth (%)		9.9%	0.5%	10.6%	16.9%	14.2%	15.0%



**Figure 2- 7: Provincial GDP Growth**

Since the national accounts of Sri Lanka are not broken down the district level, it is hard to come up with GDP numbers specifically for Jaffna District. However, the fact that much less damage was inflicted in Jaffna during the last fighting, which was fought in Vanni, makes legitimate to assume that the economy of Jaffna District has been performing particularly well. Yet, to be on a safe side, let us assume that Jaffna’s economic growth is at least at the rates on par with the entire Northern Province.

Immediately after the end of the fighting, Jaffna’s main economic sectors (agriculture, fisheries, and

construction, and to a lesser degree, commerce and finance) made a jump start and are sustaining growth since then. New markets of Colombo and the rest of the south have suddenly opened for them after the normalization of A9 road traffic. This has brought about unprecedented business opportunities for local farmers and fishermen. Despite the backwardness and poverty that still prevail in the district, economic benefits from the new markets are no doubt trickling down to the grassroots level.

Everyday observation in Jaffna brings home an increasingly accelerated economic “take off” there. The number of bank branch offices located in Northern Province is 137 in 2010, an increase by 20% from 114 in 2009. Out of 137 branches, Jaffna takes the lion’s share of 91 or 66%. Incidentally, 137 branches in Northern Province is the lowest number among provinces of Sri Lanka. Also, in terms of car registration, Northern Province recorded a staggering 33% rise from 47,031 vehicles in 2009 to 62,744 in 2010. This increase is almost double of the national average of 17% during the same period. Jaffna District also accounts for 66% of the 62,744 cars in the province.

Once again, Jaffna will be regaining its position as the commercial capital of Northern Province. This is an area that our study is not adequately able to analyze in the quantitative terms, but the underlying change is so powerful that the people of Jaffna have already begun feeling its effects. Although many people are still suffering from poverty after the prolonged conflict and economic blockage, a significant number of people, particularly those with education, have already begun to enjoy the dividends of peace. This dualistic characteristic is the reality in Jaffna in 2011, and it will certainly remain so for the time being. Possibly unlike other districts of Northern Province, elements of the gloomy past are steadily being left behind at least out of the appearance of Jaffna.

Despite the current economic boom discussed so far, a renowned local economist, Mr. Muttikrisna Saravanathan, presented a bleak view of the present macro-economic situation in Jaffna. Based on his estimation, he concluded that public administration, defence, and transfer payments from NGOs and donors account for a disproportional portion of the local economy, while the share of the private sector, including agriculture, fisheries, industry, and service sectors accounts much less than in other provinces. He insists that private investments are necessary to steer people towards self sustenance and wean them off of over 25 years of dependence on relief and welfare from the government, NGOs, and donors.

Finally, it is worth discussing remittances from Diaspora. The voluntary and involuntary migrants abroad send billions of rupees annually to their kin in Jaffna. These remittances have positive and negative implications for the local people and local economies. Foreign remittances played a critical role in mitigating the impact of the conflict and the economic embargo because they prevented the possibility of widespread starvation. On the other hand, negative impact from foreign remittances is the distortion of the local labour market. The remittances tended to make labour idle and costly. The people may have had less interest in seeking employment because of remittances. The daily wage for manual unskilled labour in Jaffna is now often over LKR 700–800, which is not much different from the wage rate in Colombo.



The bulk of the remittances received in Northern Province are from Europe, Canada, Australia and New Zealand. A salient feature of the remittances in the province is that most of them are received through informal channels rather than formal banking channels. This informal channel is called *Undiyal* in Tamil. Because of the shadowy nature of these transactions, it is impossible to estimate the actual amount of the remittances received in the region.

## **2.4.2 Economic Sectors**

### **Agriculture**

The agriculture sector plays a pivotal role in the economy of Jaffna because the soil and other climatic conditions are favourable for wide range of crop cultivation; agriculture provides the major income for a large number of people in Jaffna. Paddy is the main cereal crop cultivated on 12,224ha of land and is consumed locally. Banana, coconut, mango and grape production are important as cash crops. Livestock rearing is an integral element of farm life, and livestock is often a household subsistence activity rather than a commercial activity. Due to the past conflicts, the production of the agriculture sector declined sharply. However, agricultural production has recovered around 90% of its pre-conflict levels by now. More discussion on the local agriculture is made in Chapter 3.

### **Fisheries**

The fishing industry in the district steadily recovered after the 2004 Tsunami disaster, and production in 2005 reached 15,158 tons. However, it dropped to 13,432 tons in 2006. Production thereafter has rapidly recovered and reached 12,000 tons in 2009 thanks to the gradual removal of conflict-time restrictions on fishery operations. Furthermore, the UNHCR estimated that IDP returnee fishing families are now engaged in fishing, which would increase the fishermen population from 15,715 (9.6% of the total population) to around 25,000. Fishing crafts along the coastal areas sustained extensive damage during the tsunami disaster in 2004, but thereafter the number of fishing crafts has increased rapidly. The local fishermen are beginning to build larger craft that is capable to go fishing for multiple days. More discussion on the local fishing industry is contained in Chapter 4.

### **Manufacturing**

Prior to the conflict, Jaffna contained many small-scale industries that manufactured household items or packaged and processed food. However, most of their owners have left or closed the shops during the conflict. In 1983, there were 745 industrial SMEs in Jaffna, but this number was reduced to a meagre 34 when the conflict ended. Although Jaffna did not enjoy sizable capital investment in the past, with the notable exception of a cement factory owned by the government in Kankesanthurai (KKS), small time manufacturers used to account for a considerable piece of the economic value creation of Jaffna. (Please see the photo of the unused cement factory in KKS on page P-1.)

To reverse this trend in the post-conflict era, GOSL will reopen the Atchuvveli Industrial Estate in Kopay DS with the assistance of the Indian government in 2012. The Atchuvveli Industrial Estate was originally

established in 1977 on 65 acres, and 33 SMEs had been in operation there until it was severely damaged by the conflict in the 1990s. According to a government source, about 30 previous and new investors, particularly those from the garment industry, have expressed interest in investing in the Estate. Although some remain sceptical about its feasibility, if things go as planned, new factories could generate 3,000 to 4,000 employment opportunities.

**Table 2- 7: The Present Conditions of Major Factories in Jaffna**

District	Industries	Product	Location	Nature
Jaffna	Sri Lanka Cement Factory	Cement	KKS	Inoperative
Jaffna	Sri Lanka Cement Factory	Cement	Jaffna	Inoperative
Jaffna	Achchuvveli Industrial Estate	Industrial sheds & developed plots for various small & medium industries	Atchchuvveli	Inoperative
Jaffna	Palmyrah Distillery Industries	Arrack	Thikkam	Operative
Jaffna	Karainagar Boat Yard	Boat building	Karainagar	Inoperative
Jaffna	Fishing Net Factory	Fishing net	Kurunagar	Operative
Kilinochchi	Paranthan Chemical Industry	Caustic soda	Paranthan	Inoperative
Kilinochchi	Saltern	Salt	Elephant Pass	Operative
Mullaitivu	Oddusuddan Tile Factory	Tiles	Oddusuddan	Inoperative
Mannar	Pesalai Fish Canning Factory	Fish canning	Pesalai	Inoperative
Mannar	Pesalai Ice Plant	Ice	Pesalai	Inoperative
Vavuniya	Poonthoddam Industrial Park	Industrial sheds developed plots for various small & medium industries	Vavuniya	Operative

There are a variety of locally available resources that can possibly be used to manufacture goods in a variety of industries. palmyrah and coconut resources can be used for coconut oil, soap, toddy, arrack, mats, handicrafts, etc. Tobacco can be used to manufacture cigars and *beedi*. Fruits and vegetables can be used to manufacture jams and cordials. Clay can be used to make pottery. In addition, silica sand from Ampan and Vallipuram can be used for the production of glassware. On the other hand, although limestone is available, the renewal of the cement factory in KKS is unlikely because of environmental consideration; limestone excavation could accelerate the depletion of the underground water resources.

**Table 2-8: Resources available for industrial development<sup>17</sup>**

<b>Resource</b>	<b>Potential industry</b>
Limestone	Cement and limekiln.
Livestock	Processed milk, yoghurt, ice cream, dairy & poultry farm, biogas, and manufacture of compost manure.
Marine resources	Fish, dry fish, manufacture of fishing gear, ice plants, boat building, and processing lobsters for export.
Palmyrah	Bottling of toddy & sweet toddy, jaggery & palm sugar, distilling arrack, odiel flour, fibre & fibre products, mat weaving, and palmyrah leaf products.
Traditional skills and allied industries	Blacksmithy, light engineering workshops, metal fabrication, aluminium products, carpentry, furniture, wooden toys, and leather products.
Fruits & vegetables	Fruit processing, jams, cordials, savouries, pickles, dehydrated fruits & vegetables.
Coconut	Coconut oil, soap, <i>poonac</i> , charcoal, fibre & coir products.
Gingelly	Gingelly oil.
Grapes	Grape wine.
Paddy & rice	Rice milling, rice flour.
Chillies	Sauces & powder.
Herbs	Herbal medicine & Ayurvedic drugs.
Tobacco	Cigars and <i>beedi</i> .
Clay	Pottery.

Looking to the future of agriculture in Jaffna, the promotion of high value fruit and vegetable production and increased exports are topics that require serious considering together with progressive farmers. A considerable portion of perishable products in Northern Province is said to be wasted due to the shortage of proper storage and transportation means. The encouragement of agro-based micro-businesses and enterprises should be pursued as a major plan for development in the years to come.

A United Nations Industrial Development Organization fact finding mission to Jaffna and Mannar undertaken in November – December 2010 proposed that development of manufacturing in these two districts should be pursued along support to agriculture and fisheries, the two active economic sectors. The mission specifically identified as a priority the rehabilitation and development - the commercial rice mill industry for agriculture and ice, freezing plant, and the boat and engine repairing workshop for fisheries.

### **Tourism**

Tourism will be a billion dollar business for Sri Lanka. Tourist traffic from overseas had significantly increasing from 447,890 persons in 2009 to 654,476 persons in 2010, and it will likely register further annual increase by 40% in 2011 according to Tourist Hotels Association of Sri Lanka. The GOSL's goal is 2.5 million high-spending tourists by 2016.

<sup>17</sup> Ministry of Rehabilitation, Reconstruction & Refugees, *Jaffna Plan*, 2003.

In the meantime, tourist interests in Jaffna had been almost non-existent; the region was an infrequent tourist destination because of the constant threat of militant conflict. However, tourism has suddenly become a key service industry in Jaffna during after the latter half of 2009, and local newspapers even proclaimed that Jaffna was attracting more travellers than any other part of Sri Lanka. Although it is hard to verify this statement, it reflects the confidence of the local people in tourism potential in Jaffna.

However, currently flourishing tourism in Jaffna does not have a sound industrial basis (e.g., four star hotels of an internationally acceptable service level). Many makeshift small guesthouses have sprung up here and there to cash in on the sudden influx of domestic tourists, but their service quality is questionable and the effective government supervision is absent. In fact, no official agency specializing in the promotion and watchdog in tourism exists in Jaffna.

Nonetheless, because the hospitality trade is labour intensive, it could generate a considerable number of jobs. Moreover, through backward linkages, tourism could also provide a lucrative market for local vegetables, fruits, meat, milk, dairy products, fish, etc.

Jaffna has historical significance that can be used for tourism development since the district was once an important Portuguese colonial foothold in Asia. At present, the Dutch government supports the restoration of the Jaffna Fort, a historical site located near the coast of the Jaffna City. Other historical tourist destinations include the following:

- Thuraiyappah Stadium
- Nagaviharai
- Delft Harbour
- Casurina Beach
- O.L.R. Church
- Public Library
- Natural Harbour
- Kayts Town
- Paruthitivu
- St. Mary's Church
- Kilali - Allipalai Beach
- Pokkanai Pokkanai
- Jamuna Tank
- Nilavarai Navakiri
- Keerimalai Tank
- Maviddampuram Temple
- Sankiliyan Manthirimanai
- Sankiliyan Curve
- Mulvil Krishnan kovil
- Naguleswaram Temple

Responding to a request from the PTF, the Land Use Policy Planning Division of the Ministry of Land and Land Development conducted land evaluations of nine sites within the district in October 2009. This study was made to assist with tourism development, particularly hotel development. As a result, four sites were identified as suitable sites for future hotel development.

While the ambitious national goal toward 2016 may be attainable, depending on the world's economic situation, the issue for tourism in Jaffna is how much out of this figure it would be able to attract. If Jaffna wants to benefit from tourism development like the rest of the country, the private and public sectors should make a conscious joint effort to reach this goal. Without proper preparation for the forthcoming surge of international tourists, the district might be left behind and continue to remain marginal with regard to the tourism industry for a long time in the future.

### **Other Sectors**

Although agriculture, livestock, and fishing are traditionally major economic activities in the district, the service sector (wholesale and retail trade, restaurants, transport, communications, financial services, real estate and property services, and public and military services) now contributes more to the district's economy than the agriculture, fisheries, and industrial sectors combined. In fact, investments recently made in the retail and financial sectors by Colombo-based corporations and banks are steadily changing the outlook of Jaffna. Let me put examples. In addition to many national banks, the Indian Bank and the Hongkong and Shanghai Banking Corporation Limited have recently opened their branches in Jaffna. Jetwing Hotels which manages 12 properties spread across the country is going to construct a new hotel near the Jaffna General Hospital in 2011. These newly opened banks, shops, and hotels provide new types of employment opportunities for educated workers that are overqualified for agriculture or fishery jobs.

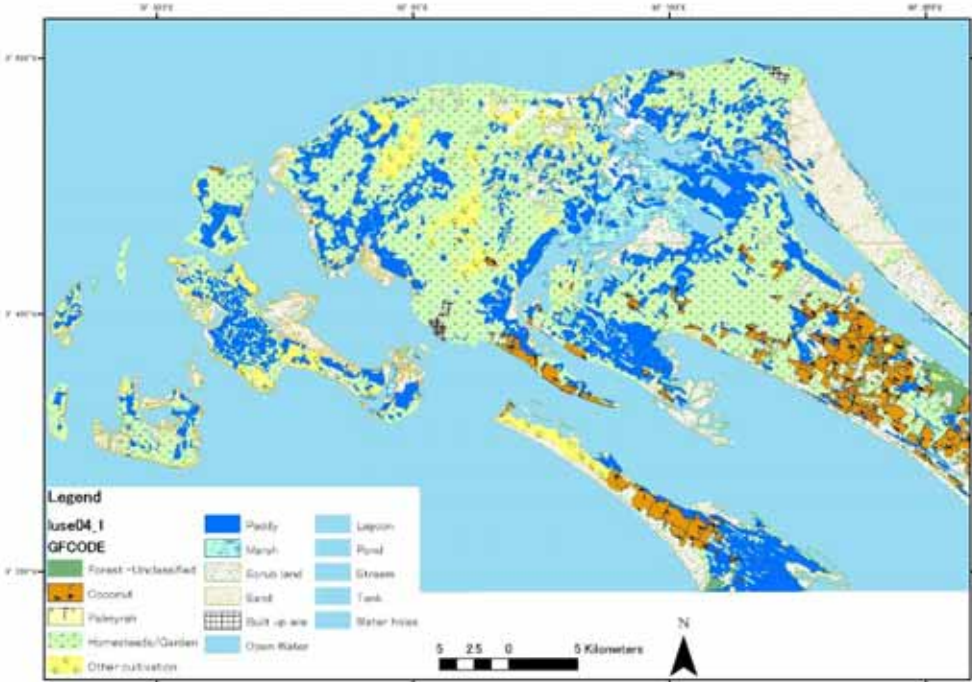
The construction sector's contribution to the economic recovery is becoming increasingly visible, so much so that agriculture labourers are difficult to hire since the daily wage paid in the construction sector is higher than that of farms. Nowadays, there is a very high demand for skill workers like mason, carpenter, welder, etc. A recent rush of infrastructure projects has provided once-in-a-century opportunity for the local construction industry and allied services. Unfortunately, however, they do not have enough skilled personnel to take this advantage. Since, Jaffna faces itself shortage of skilled workers, construction labourers from the south move to Jaffna.

Traditionally, Jaffna society accords highest priority to education and, as a result, occupies a prime position to take advantage of white colour jobs, particularly in the public sector. General orientation toward public sector employment is amply demonstrated by more than 11,000 applications received when DAD recently announced 100 employable posts. However, the Jaffna's tradition has been undermined; during the internal conflict, mass brain drain has taken place from Northern Province in general and from Jaffna in particular. Recently a national level examination was conducted for SLAS,

around 269 candidates were selected all around the island, but none of them are from Jaffna. This is perplexing and humiliation to Jaffna people.

**2.4.3 Land Use**

Figure 2- 8 was taken from a map made in 1987. At that time, most of the area in Jaffna was used for home gardens and paddy land. With time, land use has changed due to cyclones, tsunamis, conflict, salinity problems, etc. Some areas are still not used because they have been defined as HSZs.

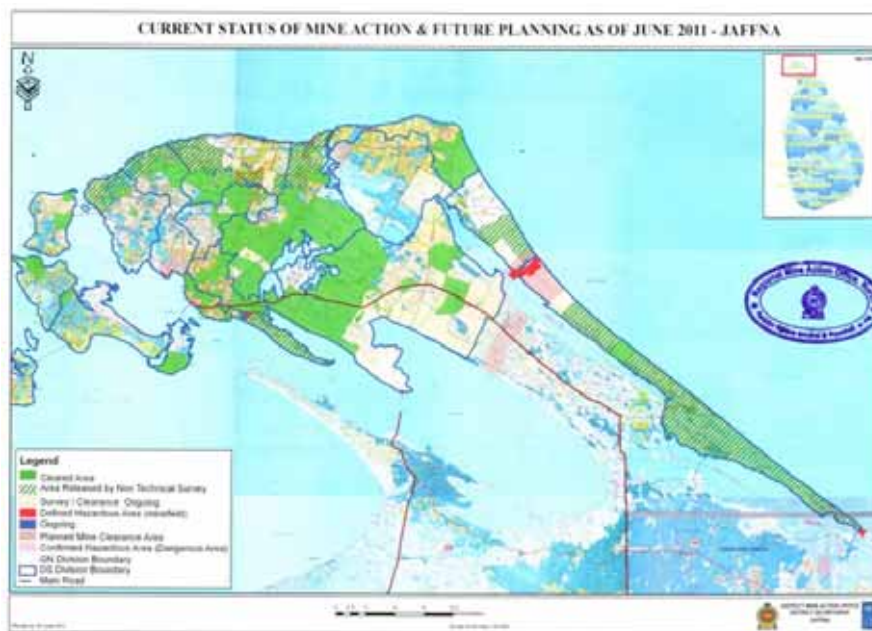


**Figure 2- 8: Land use in Jaffna District (1987)**

One of the most serious constraints of land use in certain areas of Jaffna is landmine and Unexploded Ordnance (UXOs). Landmines laid by both the Army and LTTE during the conflict still pose a serious threat to the resettlement of returned IDPs and their livelihood activities. The Regional Mine Action Office, North estimated that there was 60,962,591m<sup>2</sup> of identified area of mine risk. By the efforts of demining agencies including international NGOs and the Army, as of June 2011, 63.3% (38,618,235m<sup>2</sup>) of the area was cleared with finding 96,879 anti-personnel mines, 199 anti-tank mines, and 99,699 UXOs. The progress of mine action together with mine awareness programmes to the population has been made steadily, especially in year 2010 and 2011. The government assigned priority to implement demining action at the resettlement areas. Figure 2- 9 and Figure 2- 10 shows the comparison of mine action status between May 2010 and June 2011. Many of the identified areas were cleared, especially in former HSZ.



**Figure 2- 9: Current Status of Mine Action & Future Planning Map as of May 2010<sup>18</sup>**



**Figure 2- 10: Current Status of Mine Action & Future Planning Map as of June 2011<sup>19</sup>**

However, there is still 22,344,356m<sup>2</sup> remaining area to be cleared. Remaining mine field is located at former HSZs and frontline of both forces in the conflict time. Especially in Nagarkovil area of Maruthankerny and borderline with Kilinochchi District are so heavily contaminated, their clearance is expected to take more than two years.

In addition to landmine, there are a large number of UXOs, especially in battle fields during the conflict. Many cases of explosion incidents and casualties of UXOs were reported. Typical cases included children’s injury when their playing with UXOs, and farmers’ injury when burning bushes for agriculture purpose. In contrast with landmine, it is difficult to identify exact locations of UXOs, although the

<sup>18</sup> Regional Mine Action Office, North

<sup>19</sup> Regional Mine Action Office, North

frontlines have a possibility of large number of UXOs. Therefore, the action to UXO clearance is expected to take much more time than the mine clearance. Like European countries and Japan after the Second World War, the UXO issue will continue to be a constraint for infrastructure development and livelihood activities as well as land use planning.

Another serious constraint in terms of land use is the issue of restricted areas for military purpose. There had been a number of HSZs set up by the Army in Jaffna. The HSZs were created at the strategic locations such as coastal areas, airport, and frontlines against LTTE controlled areas. After the end of the conflict, HSZs have been released gradually to original land owners. Especially in year 2010 and 2011, many were released after the landmine clearance. The government announced that there was no longer HSZs in Jaffna and that most of private land would be returned to the original land owner by the end of 2011. However, returnees to released lands face a number of difficulties such as the lack of basic infrastructure and houses. Due to the long term displacement of land owners and the fact that whereabouts of some of land owners are unknown as well as abandonment of infrastructure, many of released areas are covered by bushes and look like jungle. It is necessary to prepare town plans with land use plan, considering these issues.

#### **2.4.4 Social Services**

##### **Education**

Historically, Jaffna has been relatively better off than other districts in Northern Province in terms of educational level and occupation, health status, income level, etc. This is reflected in the fact that the vast majority of Jaffna population are landowners.<sup>20</sup>

There are 487 schools in the district, but 74 of these are not functioning due to security restrictions such as the HSZ. Throughout the conflict period, hundreds of school buildings were razed to the ground and equipment and belongings were damaged beyond repair. There were also instances where school buildings were put to use for purposes other than education. In addition to the shortage of school buildings and educational equipment, teacher shortages are often a problem in the district, particularly for English and primary education subjects.

Upgrading educational services is vital for general economic prosperity of the district by way of supplying skilled human capital for developing the society and industries. There is a huge pent-up demand for professional skills, but English and information technology are in particular demand in Jaffna.

##### **Health**

Regional Directorate of Health Services is accountable for health services in Jaffna. Public services were dealt a heavy blow by the economic embargo during the conflict period and the brain drain caused by the

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<sup>20</sup> That is, only 8% of Jaffna District's population did not own any land at all in 2002 compared to 12% in 1982. In other words, 92% of families of the district own land.



emigration of intellectuals. However, Jaffna has always managed to maintain an optimal level of basic health facilities with available resources.

There are two types of health facilities available, namely, Western medical facilities and Ayurvedic facilities. With regard to Western medical facilities, there are 16 primary hospitals, 22 divisional hospitals, four base hospitals, and a teaching hospital. On the other hand, the Ayurvedic facilities operate 30 free dispensaries under the supervision of the local government, eight Ayurveda central dispensaries, two rural Ayurveda hospitals, and an Ayurveda teaching hospital.

#### **2.4.5 Infrastructure**

Jaffna was badly affected with destruction of infrastructure. Roads, bridges, water supply and drainage systems, fisheries harbours, schools, hospitals/health centres, private dwellings, power plants, and telecommunications were damaged throughout the district. Rehabilitation and reconstruction of these infrastructures is a prerequisite for economic revival of the district, and some works have already started.

##### **Roads and Railway**

No new roads or railways had been constructed after 1983; the renovation of roads existed, but only at a minimal level. Only the main roads had been renovated with tar; all the other roads had been very rarely renovated with gravel sand. The railway, which had been demolished by 1990, had never been reconstructed. With the end of conflict, however, there have been several projects by GOSL with the support of the World Bank, ADB, India, China and other international assistance to renovate the roads, bridges and railway in the peninsula. Once-abandoned transportation infrastructures are now being repaired.

Jaffna has four categories of roads which have been classified as A, B, C and D, according to their importance and usage. 280km of A-class highways, 249km of B-class highways, 390km of C-class roads, and 151km of D-class roads are currently available. More discussion about road projects in Jaffna can be later found in the section of '2.8 Donor Support.'

##### **Electricity**

The whole electricity network of the district was destroyed in 1990. After 1996, the restoration of the electricity network was started by the Ceylon Electricity Board (CEB). However, the process was very slow until the cease fire in 2002. In 2006 it was again disrupted due to the escalation of the conflict, but the restorations started to improve by 2007. By 2008, the 82,075 households in Jaffna had access to electricity for domestic use. Additionally, 1,490 industrial consumers, 8,216 commercial consumers, and 1,925 religious entities utilized electricity produced by diesel generators.<sup>21</sup> The mode of electric power is still a major bottle neck to the industries. More discussion about an electricity supply project in Jaffna can be later found in the section of 2.8.

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<sup>21</sup> Jaffna District Statistical information 2009

## **Water Supply**

In terms of water-related infrastructure, there are 81,722 open wells and 12,324 tube wells for lifting water from the groundwater table. Recharging the ground water table is crucial for the district. This recharge has been regulated by control gates at sea water exclusion barrages and salt exclusion dykes at Araly, Ariyalai, and Thondamanaaru. However the conflict and poor maintenance damaged these structures, posing a severe threat to the availability of drinking water in the district. In addition, it caused groundwater pollution by salt water.

While renovation and proper maintenance of these structures are considered essential, it is also important to expedite pipe-borne water transmission from Kilinochichi to guarantee water availability in the district. At present, the existing pipe-borne water supply in the district constitutes as little as 3% of the total, and there are six water supply schemes that have been abandoned due to salinity intrusion. A detailed discussion of issues regarding groundwater is made in '2.6 Environmental Issues'. The section of 2.8 will explain an important water supply project in Jaffna.

## **2.5 Social Structure**

### **2.5.1 Government Administration**

The Sri Lankan government administration works at five levels: central, provincial, district, division and GN<sup>22</sup> Division. Broadly speaking, the central and provincial levels are responsible for planning, budgeting, monitoring, and review. The central and devolved institutions at the district level are responsible for backstopping, coordination, and implementation in coordination with the office of the GA in each district.

#### **(1) Provincial level**

Nine Sri Lankan Provinces as shown on the Maps of this Final Report were given their legal status only in 1987 when the 13<sup>th</sup> amendment to the 1978 Constitution of Sri Lanka established the provincial councils under the Indo-Lanka Accord as a part of the process for the devolution of power.

The Indo-Lanka Accord also required the merger of the Eastern and Northern provinces into a single administrative unit, and President Jayewardene issued proclamations enabling the Eastern and Northern provinces to be a single administrative unit, thus creating North Eastern Province. Elections in the newly merged North Eastern Province were held on 19 November 1988. After a period of about twenty years, in view of the judgment of the Supreme Court of Sri Lanka issued on 16 October 2006, North East Provincial administration has come to be de-merged into two: Northern Provincial administration and Eastern Provincial administration. Moreover, Northern Eastern Province was formally demerged into Northern and Eastern Provinces on 1 January 2007.

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<sup>22</sup> Grama Niladhari division is a subunit of a divisional secretariat at the village level administered by Grama Niladhari (Village leader) appointed by the central government to carryout administrative duties

Major General G.A. Chandrasiri was appointed the Governor effective 12 July 2009 just after the end of the conflict. The Governor, appointed by the President, is the constitutional head of the province, while the Chief Minister is the head of the government and head of the council ministers. The Provincial Government is not yet functioning fully in Northern Province until the election of the provincial Council.

Northern Province Office, including the office of Governor and other functions, is expected to settle in Mankulam, a town between Kilinochchi and Vavuniya, in 2013 as the administrative centre of Northern Province. In the meantime, while waiting for the completion of preparations, the Provincial office shifted from Trincomalee to Jaffna in February of 2011 with many small offices scattered in the central part of Jaffna. The Policy statement of the Governor for the 2011 Budget states, “However, the master plan has been already prepared to locate the NPC in Mankulam City Plan by the Urban Development Authority”. Yet, it may be difficult to carry out the planned transfer on schedule, because this will require considerable development of infrastructure in advance in Mankulam.

However, so far the role of Northern Province Office has been limited, since the election of Northern Provincial Council was not implemented and is expected in 2012, depending upon the social situation.

The Constitution prescribes the procedure of devolving powers as the following three categories: Provincial council list, reserved list, and concurrent list (Article 154A-Ninth Schedule).

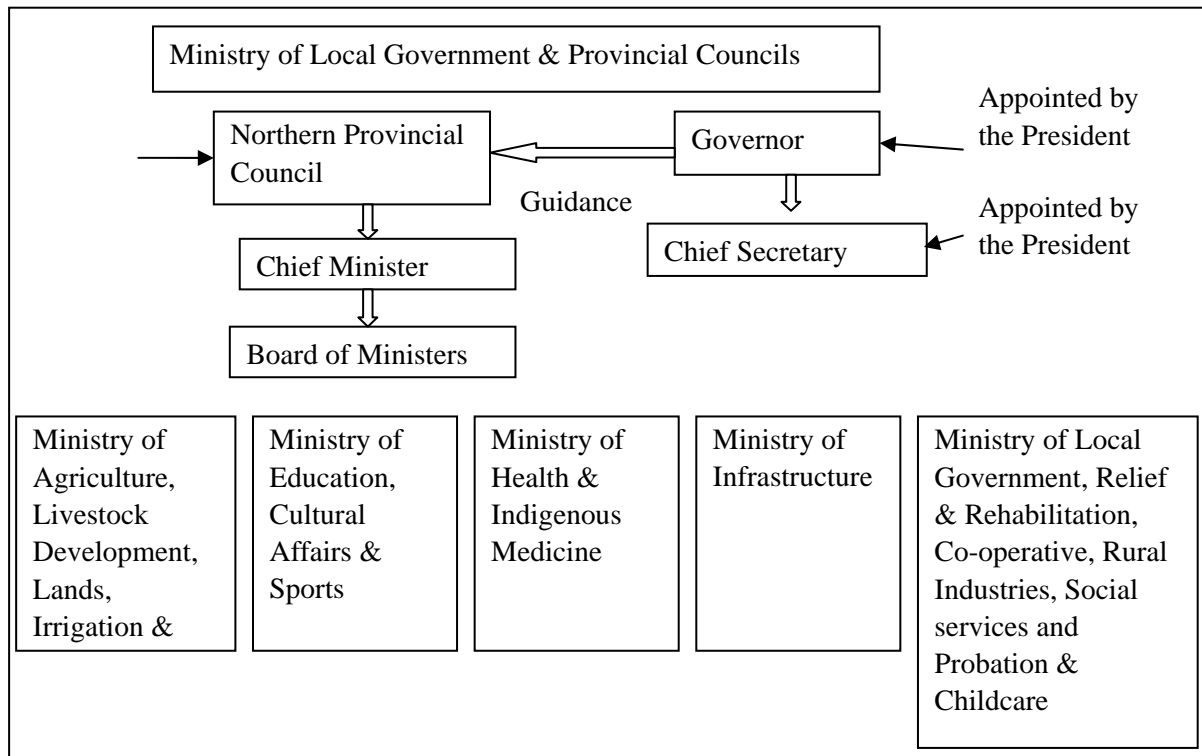
The Provincial council list includes the following:

1. Police and public order to the extent within the province
2. Planning and implementation of provincial economic provinces
3. Education and educational services
4. Local government such as Municipal council (MC), Urban council, Pradeshiya Sabhas
5. Provincial housing and construction
6. Roads and bridges and ferries other than national highways
7. Social services and rehabilitation
8. Agriculture and agrarian services
9. Rural development
10. Health
11. Indigenous medicine
12. Food-supply and distribution within the province
13. Co-operatives
14. Land
15. Irrigation
16. Animal husbandry

The Reserved list, which to be reserved under the central government, includes defence, foreign affairs, posts and telecommunications, justice, and finance in relation to national revenue, etc.

Thirdly, the Concurrent list is also stipulated in the Constitution, which requests the two actors to decide on negotiation bases. This list includes formulation and appraisal of strategies at the provincial level, and the evaluation of the performance of institutions and enterprises engaged in economic activities.

They hold meetings of Chief Ministers of nine provinces, which negotiate with the relevant ministries on their problems including, for example, the shortage of administration officers in North and East Provinces with the Ministry of Public Administration and Home.



**Figure 2- 11: Administrative Line of Province Level**

At present there are five Ministries headed by Secretaries. The Secretaries were appointed by the Hon. Governor. The five Ministries are as follows:

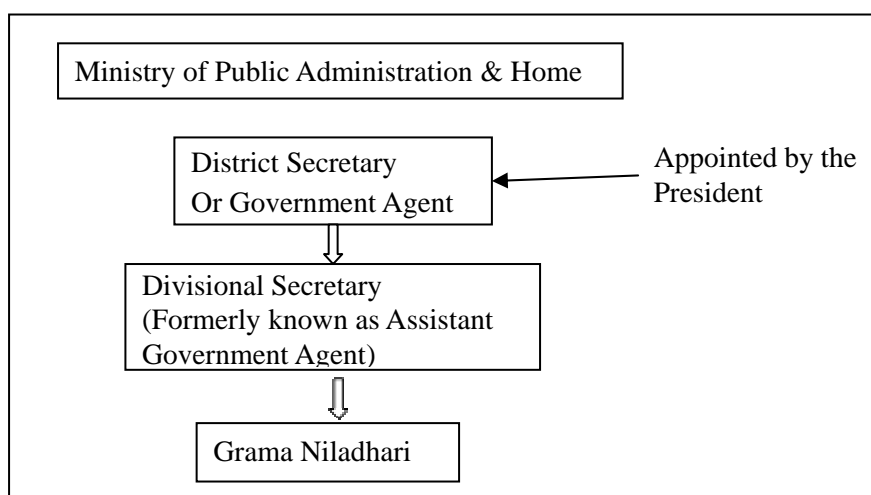
1. Ministry of Agriculture, Livestock Development, Lands, Irrigation & Fisheries
2. Ministry of Education, Cultural Affairs & Sports
3. Ministry of Health & Indigenous Medicine
4. Ministry of Infrastructure
5. Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural, Industries, Social services and Probation & Childcare

These five ministers are in charge of the different sectors, including Agriculture, Animal Production and Health, Land Administration, Irrigation, Education, Sports, Health Services, Indigenous Medicine, Local Government, Cooperative Development, Management Development and Training, Industries, Rural Development, Road Development, Social Services, Buildings, and Probation & Childcare.

## (2) District & Division Level

GA or a District Secretary is a civil servant appointed by the President to govern a district. The post is one of the oldest in the civil service, as it had been established by the British during the colonial era.

Jaffna District comprises 15 DS Divisions. The GA of Jaffna is functioning as the coordinating and executing officer of the entire district. The DS Divisions are further sub-divided into 435 GN Divisions (villages). Historically in Jaffna, the GA has played the role of providing basic services to the residents there and of coordinating various actors including the international donors implementing projects even during the difficult time of the conflict.



**Figure 2- 12: Administrative Line of the Civil Service at the District Level**

Popularly elected municipal councils, urban councils, and Pradeshiya Sabhas perform a similar function in urban and rural areas, whose powers are limited, but which assist the officers of each level in assessing public views and mood and in setting development priorities. Their term of office is four years. In general, municipal councils are established for cities and large towns, urban councils for less urbanized areas, and Pradeshiya Sabhas for rural areas .

In Jaffna District, local government institutions comprise the Jaffna MC, 3 Urban Councils, and 12 Pradeshiya Sabhas. The local government institutions came under the supervision of the Commissioner of Local Government. The main Acts relating to local government are the MC Ordinance No. 29 of 1947, the Urban Councils Ordinance No. 61 of 1939, and the Pradeshiya Sabha Act No. 15 of 1987. The three different types of local authorities have slightly different powers. MCs have more powers than Urban Councils and Pradeshiya Sabha.

Local authorities have the power to instigate legal action, enter into contracts, acquire land, and employ staff. However, these powers are somewhat curtailed by the fact that they are subordinate to the central government and provincial councils and by the fact that other state institutions such as the GA or District Secretariat enjoy similar powers as the local authority.

The Jaffna MC Election was implemented in the year 2006. The election of three urban councils and 13 Pradeshiya Sabhas was held on 23 July 2011.

**Table 2- 9: Population of Local Authorities in Jaffna<sup>23</sup>**

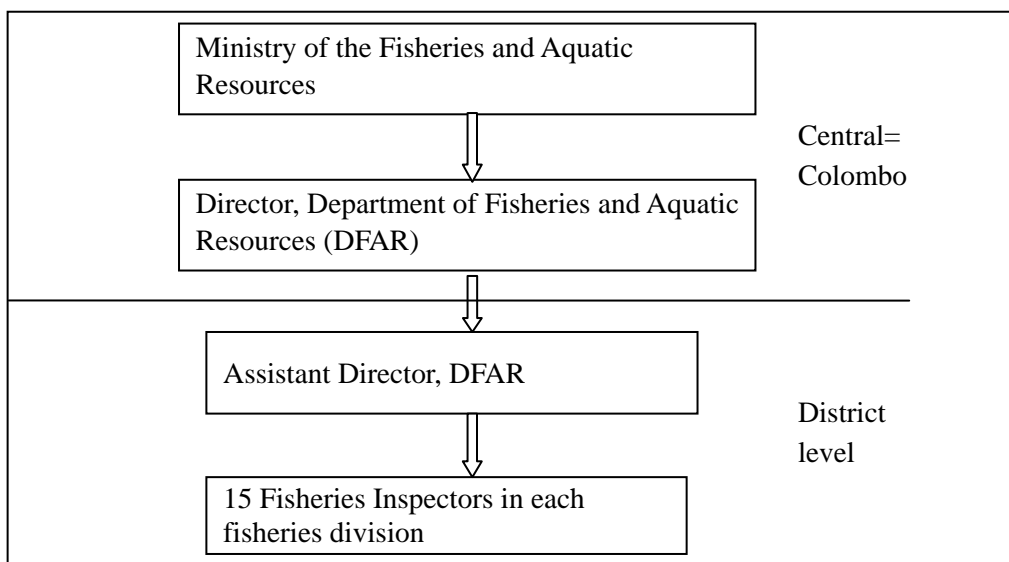
No	Local Authority	DS Division	Location	Population
1	Jaffna Municipal Council	Jaffna / Nallur	Nallur	127,919
2	Chavakachcheri Urban Council	Thenmaradchi	Chavakachcheri	14,589
3	Point Pedro Urban Council	Vadamarachchi North	Point Pedro	15,804
4	Valvettithurai Urban Council	Vadamarachchi North	Valvettithurai	18,000
5	Nallur Pradeshiya Sabha	Nallur	Thirunelvely	44,244
6	Valikamam South-West Pradeshiya Sabha	Valikamam South West	Manipay	56,520
7	Valikamam West Pradeshiya Sabha	Valikamam West	Chulipuram	50,886
8	Valikamam South Pradeshiya Sabha	Valikamam South	Chunnakam	51,495
9	Valikamam North Pradeshiya Sabha	Valikamam North	Mallakam	24,153
10	Valikamam East Pradeshiya Sabha	Valikamam East	Kopai	75,984
11	Vadamarachchi South West Pradeshiya Sabha	Vadamarachchi South-West	Karaveddy	45,625
12	Point Pedro Pradeshiya Sabha	Vadamaradchi North	Puloy	57,059
13	Chavakachcheri Pradeshiya Sabha	Thenmaradchi	Kodikamam	53,520
14	Velanai Pradeshiya Sabha	Islands South	Velanai	16,174
15	Kayts Pradeshiya Sabha	Islands North	Kayts	14,709
16	Karinagar Pradeshiya Sabha	Karainakar	karainagar	10,794
17	Delft Pradeshiya Sabha	Delft	Delft	5,030
<b>Total</b>				<b>682,505</b>

### (3) National Policy Implementation through Local Administration

It is expected to devolve the powers of the central government to the provincial councils as stated in the Constitution. However, partly because the election was not yet implemented in Northern Province as of timing of writing this report and partly because the many institutions of the central government were established at the level of each district and function under the coordination of GA, many Ministries still work directly at the district level through their own offices or GA offices.

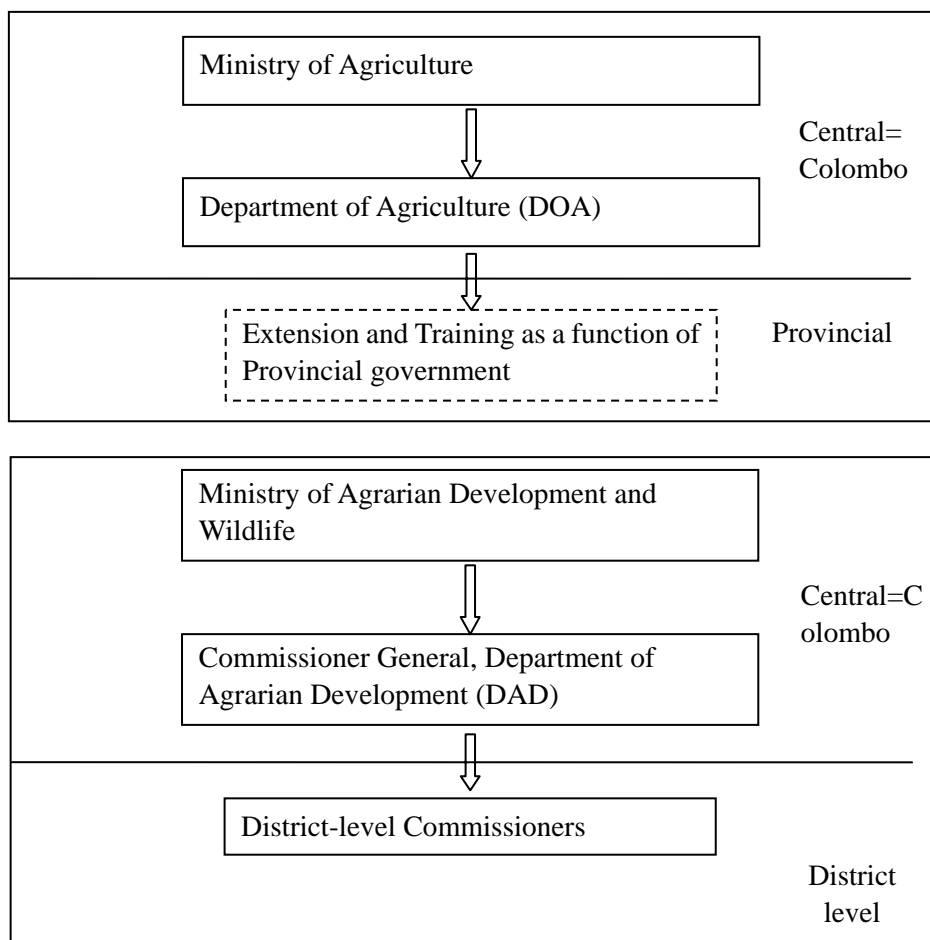
The Ministry of the Fisheries and Aquatic Resources, for example, works directly at the level of each district. There are 15 Divisional Offices along the coastal belt of Sri Lanka headed by Assistant Directors who are supported by a network of Fisheries Inspectors.

<sup>23</sup> Northern Provincial Council Statistical Information 2010: Table 18.3.9, 18.3.7



**Figure 2- 13: Implementation of the policies on fisheries at the local level**

While the Ministry of Agriculture works through Northern Provincial Council, the Ministry of Agrarian Services and Wildlife also has the DAD at the district level and works directly through the mechanism of the central government. The provincial government is now trying to get this function under its power, since the agrarian service is under the list pertaining to the Province in the Constitution.



**Figure 2- 14: Implementation of agricultural policies at the local level**

Similarly, the Ministry of Education works directly at the level of district through their zone offices in Jaffna, Islands, Valikamam, Thenmarachchy, Vadamarachchy. The Ministry of Electricity and Water Supply also directly operates by its own Electricity Board and Water Supply Board, although a small amount of infrastructure within the province is placed under the province.

Meanwhile, the Ministry of Health has devolved its power and mandate to the provincial governments, except for national hospitals, such as the Teaching Hospital in Jaffna.

The creation of the provincial council is aimed to transfer a part of the authority of the central government and decentralize the administrative structure. However, the details of the process still remain murky and sometimes confused in the immediate post-conflict period.

### **2.5.2 Community Based Organizations (CBOs)**

#### **(1) Overview of CBOs in Sri Lanka**

##### **1) CBOs in Sri Lanka**

Village development through community activity is quite common in rural areas of Sri Lanka. For example, “Shramadana work”, which means communities voluntarily contributing to maintain and develop their villages, is observed nationwide. Various types of CBOs have been developed by the government and NGOs.

The GOSL has a mechanism to carry out development activities at the community level, registering CBOs with respective departments and assigning field level officers for supervising CBOs. Most of the field level officers are stationed at the Division level and they visit communities. GNs and Samurthi Animators are positioned at GN division. GN who is the field level administrative officer provides general advice for the CBOs formulated by GN divisions.

Technical assistances to improve productive activities are offered through the relevant CBOs to agriculture and fisheries. Particular social groups; women, children, the youth, the aged, poor communities and persons with disability are target to formulate CBOs, developing mutual assistant mechanism. For example, Samurdhi Bank Society (SBS) has been formed under the Samurdhi programme or the National Programme to alleviate poverty. All recipients of Samurdhi, who are required to participate in SBS, are eligible to apply for loans and participate in skills-programme for livelihood activities conducted by the Samurdhi Authority. Attendance rate is high at SBSs meeting because members worry about the possibility of losing their eligibility for Samurdhi assistance if they fail to participate in the meetings.



The GOSL utilizes the CBOs as a community level channel to provide subsidized materials as well. Furthermore, numbers of village development projects, such as Gamaneguma<sup>24</sup> and Community Water Supply and Sanitation Projects,<sup>25</sup> have been delivered through the CBOs. Community contract system,<sup>26</sup> which is authorized by the procurement guideline of the GOSL, has contributed to community infrastructure development along with capacity building of CBOs.

In the north and east, several projects have been implemented with community participation for rehabilitation and development. Reawakening project<sup>27</sup> and North East Housing Reconstruction Programme<sup>28</sup> are major on-going community projects to rehabilitate and reconstruct living standard of conflict affected people.

Reactivation of major CBOs was started in the northern area after the conflict was over. The Joint Plan showed the needs of capacity building for communities to ensure access to key government services. The Joint Plan also mentioned the effectiveness to promote linkage between statutory bodies and community based activities for support vulnerable persons.

## 2) Major CBOs and Government Organizations in Charge

Table 2- 10 is the list of major CBOs under the GOSL organizations.

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<sup>24</sup> The Gamaneguma was commenced in 2006 to establish economically stable villages. Village infrastructures and livelihood measures were improved. Presently second community development and livelihood improvement project is carried out with a mission of 'Strengthened, Empowered, formally organized rural communities active in the path to progress' in the southern areas. [http://www.gemidiriya.org/sub\\_link\\_view.php?doc=2](http://www.gemidiriya.org/sub_link_view.php?doc=2)

<sup>25</sup> <http://www.cwssp.org/>

<sup>26</sup> Eligible CBOs to apply for community contract are FO, FCS, MPCs, RDS, WRDS, SDS and so on.

<sup>27</sup> This project is implemented in North East Province and adjoining districts to restore livelihoods, enhance agriculture and other production, building capacity for sustainable, social and economic reintegration <http://www.re-awakening.org/>

<sup>28</sup> <http://nehrp.com/>

**Table 2- 10: CBOs, Government Departments and Officers in Charge, and their Roles**

Name of CBOs	Departments in charge (Line Ministries)	Officers in charge	Roles
Rural Development Society (RDS)	· Department of Rural Development (Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services)	· District level : District Officer of Rural Development(DORD) · Division/Field level : Rural Development Officer (RDO)	· CBOs for village development activities ( It is formulated by GN Division, but they can be established at village level taking into account population and the geographical conditions of the villages)
Women Rural Development Society (WRDS)			
Community Center	· Assistant Commissioner of Local Government :ACLG(Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services)	· Field/Division level : Community development Officer (CDO)	· CBO for community development
Fishermen's Co-operative Societies (FCS)	· Department of Fisheries and Aquatic Resources:DFAR (Ministry of Fisheries & Aquatic Resources Development FARR) · Department of Cooperative Development (Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services )	· District level : Asst. Director of DFAR · Division/Field level :Fisheries Inspectors (FIs) of DFAR. · Division/Field level : Community Development Officers (CDOs) of Department of Cooperative Development - supervising institutional matter	· FCSs function for development of fisheries activities and fisheries communities.
Farmers' Organizations (FO)	· Department of Agrarian Development (Ministry of Agriculture)	· District level : Asst. Director, DAD · Division/Field level :Divisional Officer (DO), DAD / AI(Agriculture Instructor), DOA for technical instruction	· Field-level base for agriculture development
Cooperative society for farmers (e.g., Palm Development Co-operative Societies, Live Stock Breeders, Seed production co-operative society, Agriculture Production & Consumption)	· Department of Cooperative Development (Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services )	· District level : Deputy Director of Agriculture (DD), DOA / Veterinary Surgeon of Department of Animal Production and Health (DAPH) · Division /Field level :Field level officers from relevant department · Division/ Field level: Community Development Officers (CDOs) of Department of Cooperative Development - supervising institutional matter	· Field-level base for agriculture development
Multi Purpose Co-operative Societies (MPCS)	· Department of Cooperative Development (Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services )	· Division/ Field level: Community Development Officers (CDOs) of Department of Cooperative Development	· Nationwide co-operative retail and purchasing network
Thrift & Credit Co-operative societies (TCCS)	· Department of Cooperative Development (Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services )	· Division/ Field level: Community Development Officers (CDOs) of Department of Cooperative Development	· Cooperative society for Thrift & Credit activities
Samurthi Bank society	Samurthi Authority (Ministry of Economic) <i>- Samurthi program is the National Program to alleviate poverty</i>	· District level : District Samurthi Officer, Samurthi Authority · Field/Division level : Samurthi Animator/ Samurthi Development Officer	· CBO for National Samurthi program
Youth club	National Youth Service Center ;NYSC (Ministry of Youth Affairs and Sport)	· Field/Division level : Youth officers	· CBO for youth affairs

(2) CBOs in Jaffna

1) Background

Before the conflict, CBOs such as cooperative societies and Community Centres were very active in Jaffna. They supported employment and welfare activities at the village level. Cooperative societies, which were amalgamated from small cooperative groups, contributed not only to marketing of agricultural

and fisheries products but also to village development by managing pre-schools and providing loans. Community Centres functioned as a focus for common activities, providing members with opportunities for exchanging ideas and providing assistance.

These activities were negatively affected by the conflict during the past 30 years. Most CBOs became weakened and some have ceased to function due to the displacement of their members. Frightening incidents - such as a number of leading CBO figures were killed or went missing - discouraged community leaders from maintaining organizations. Sometimes, armed groups misused CBOs' mobilization and financial capabilities. The field officers in charge had to keep a low profile in the deteriorating situation. Another negative impact from the conflict on the CBOs is falling behind in promotion of community participatory approach.

The Indian Ocean tsunami which struck Sri Lanka in 2004 also affected CBO activities. A lot of assistance was given to tsunami-affected areas to rebuild villages with the help of CBOs. This motivated CBOs but also deepened their dependence on aid agencies. After the conflict in 2009, GOSL and NGOs have commenced effort to invigorate CBOs.

## 2) Issues of CBOs

Following issues are observed in activities of CBOs.

### a) Weakened institutional capacity by the effect of the conflict

Lack of appropriate leaders, weakened mutual assistant mechanism and poor management system are observed in CBO activities. CBOs also have lost vigorous function in local economic and community development programmes.

### b) Social change after the end of the conflict

CBOs have faced up with social changes after the end of the conflict, such as increasing number of vulnerable people, the change in political power balance and enhanced communication and transportation with other districts.

### c) Dependency and less variety of CBO activities caused by donor supported projects

Many donors supported communities for village rehabilitation. Those projects were useful to improve people's living environment, but they tended to grow CBOs' dependency on aid organizations as well. It also reduced variety of CBOs activities since communities were keen on maintaining supported activities.

### d) Top down mechanism and marginalization of vulnerable groups

Strong leadership, which is common in Jaffna, is effective to lead the communities, but it has promoted top-down management style. Another issue is difficulty to promote active participation of vulnerable socio economic groups in mainstream of CBO activities. For example, families of farmers who possess lands tend to take management role, while landless farmers' families just stay in the CBO as inactive members or even not approach CBO at all.

Details of the issues are shown in the following Table 2-11

**Table 2- 11: Issues of CBOs in Jaffna**

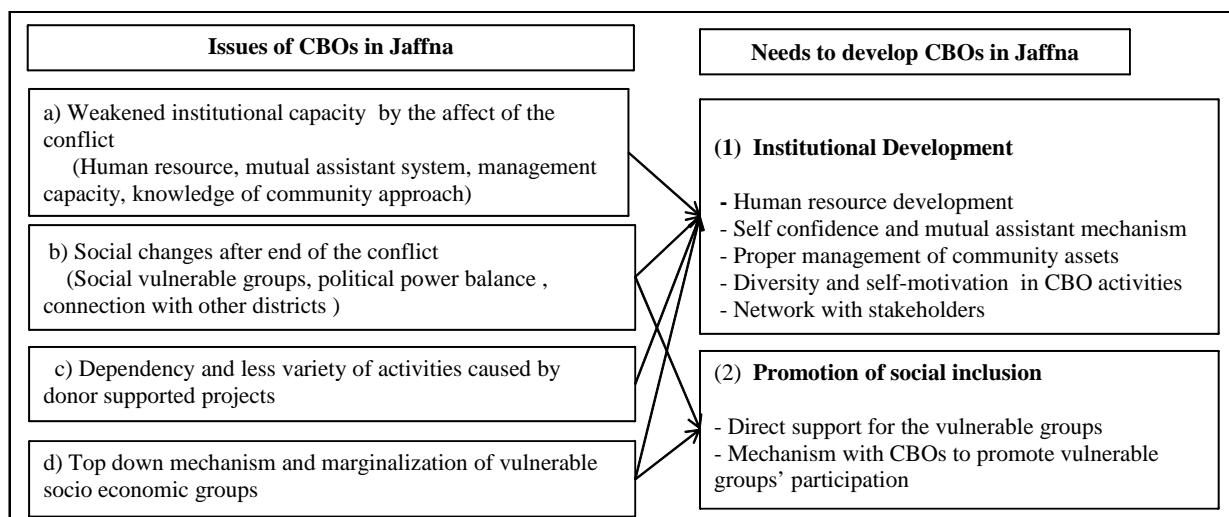
<b>a) Weakened institutional capacity by the effect of the conflict</b>	
Lack of human resources	- There are shortages of human resources who can take leadership, especially among young communities.
Poor self confidence and mutual trust	- Painful and traumatic experiences, including losing family members/relations and properties during the conflict, were enough to deprive of people's self confidence. - Mutual and social trust was taken from communities because of the bad experience in displacement and living in deteriorated security situation.
Behind in development and weakened local industries	- The conflict had disturbed development of Jaffna. Communities who had hardship to make livelihood were difficult to put priority on common activities. - CBOs related to productive activities, such as agriculture and fisheries, had been degenerated as the local industries were disturbed.
Poor management capacity	- Inadequate practice is observed in correspondence, meeting minutes, inventory of community assets and activities. - Democratic decision making mechanics, mobilizing CBO members, is yet to be developed. - A lot of community assets, including revolving fund, are not receiving proper maintenance and operation.
Gap in experience and knowledge of community approach	- Community approach has been improved during past 30 years in Sri Lanka. Various community infrastructure development projects were implemented in the south, while major projects carried out in the north were for emergency assistance or village rehabilitation. Consequently, CBOs and stakeholders in Jaffna have delayed development of capacity to adopt community approach.
<b>b) Social changes after end of the conflict</b>	
Increasing in number of social vulnerable groups in communities	- Vulnerable groups, such as WHFs, PWDs and IDPs were increased in communities by the conflict. Resettled IDPs live in difficult living condition, especially resettled people in released HSZs have to tackle with rebuilding living environment and livelihood measures from the very beginning stage since most of village facilities were damaged. Young widows have needs to assure livelihood measures. Those who were handicapped during the conflict are also necessary to have a support for restoring the livelihood.
Increasing social connection with other districts	- Many traders from the south started business in Jaffna after opening of A9 road in 2009. It has created both business chances and difficulties for the communities. - Various Jaffna products; mainly agriculture and fisheries products, are in high demand, but there are relevant Cooperative Societies who do not have enough capacity to provide demanded quality and quantity of products. Negotiation skills, including communication ability of Sinhala language, also seem to be developed for profitable business with the south. In addition, some home made products are under pressure from the south.

Change of power balance	- Communities were forced to stay under unusual political structure wartime period and presently they stay in the transition period toward democratic politics. Infiltration of normal politics is supposed to take a time, especially at the community level. CBOs without appropriate leadership and well balanced network can be influenced by particular political groups.
c) Dependency and less variety of activities caused by donor supported projects	
Lack of spontaneous action from CBOs and poor mutual assistant mechanism	- Mostly CBOs played active role for implementation of rehabilitation and development projects as a partner with the government and NGO. It was useful to promote recognition of CBOs in the communities, but it was not enough to bring up spontaneous action or self-motivation of CBOs and mutual assistant mechanism
Less variety of activities	- Many CBOs are keen on maintaining activities which were introduced by the projects with outside support. For instance, many WRDSs commenced revolving fund activities with a support by aid organizations and presently most of WRDS members consider that their main role is operation of revolving fund. Agriculture and fisheries communities have managed their organizations to receive subsidized materials and utilize provided equipment.
d) Top down mechanism and marginalization of vulnerable groups	
Top down mechanism by strong leadership	- Strong and rigid leadership is common in Jaffna communities. Leaders are keen on undertaking their responsibility and community members follow the leaders' instruction. Such a strong leadership is effective to lead the communities, while there is a potential to suppress communities' spontaneous contribution and innovative ideas.
Marginalization of vulnerable socio economic groups in communities	- Different socio economic groups, such as farmers who possess cultivation land and agro labours (landless farmers), live in nearby areas. Generally, living condition of the latter groups is more difficult than that of the former groups. Furthermore, some groups whose productive activities have not been recognized well regardless their economic value. Those groups can be marginalized from mainstream of CBO activities.

### 3) Needs

The CBOs need to develop institutional capacity to rise above their weakness. Institutional development is essential to strengthen competitive power in productive activities, develop bottom-up process and promote spontaneous activities. Promotion of social inclusion is necessary to recover mutual trust among community and avoid marginalization of vulnerable groups from main stream of CBOs.

Following Figure 2-15 shows issues of CBOs and need to cope with the issues.



**Figure 2- 15: Issues of CBOs and development needs**

Details of the needs are as follows,

**Table 2- 12: Needs of CBOs in Jaffna**

<b>a) Institutional Development</b>	
Human resources development	<ul style="list-style-type: none"> <li>- Community leaders who can lead CBOs, promoting bottom up process, should be brought up.</li> <li>- Fiduciary capacity, such as recording and procurement system, is also to be developed.</li> <li>- Community leaders also need to improve coordination and negotiation skills for effective community and productive activities</li> </ul>
Promotion of Self confidence and mutual assistant mechanism	<ul style="list-style-type: none"> <li>- Communities should be aware of CBOs' potential to resolve community issues and develop their living standard by way of utilization of community resources, coordinating with stakeholders.</li> <li>- Social trust as well as mutual assistant mechanism should be recovered, promoting members' sense of self-efficacy.</li> </ul>
Development community assets with proper management system	<ul style="list-style-type: none"> <li>- Community infrastructures for socio-economic activities should be rehabilitated and developed.</li> <li>- CBOs should promote proper management system of their assets, including community fund, since they will have to deal with more development activities in the normalization process.</li> </ul>
Promotion of diversity and self-motivation in CBO activities	<ul style="list-style-type: none"> <li>- Innovative movement and self motivation to explore more potential activities of CBOs is necessary to promote.</li> </ul>
Promotion of network with stakeholders	<ul style="list-style-type: none"> <li>- Reinforcement of access to the government mechanism for national development service is important for CBOs in the process of normalization after end of the conflict.</li> <li>- CBOs need to promote local network with stakeholders, such as the government departments and NGOs, keeping two- way communication between service providers and recipients.</li> </ul>
<b>b) Promotion of social inclusion</b>	
Direct support for those vulnerable groups	<ul style="list-style-type: none"> <li>- Vulnerable groups need physical assistance to improve living condition and livelihood measures to ensure the basic human needs. Besides, they need to have opportunities to share their difficult experience and problems in peer relationship.</li> </ul>

Strengthen CBOs to promote vulnerable groups' participation in CBO activities	<ul style="list-style-type: none"> <li>- If major CBOs have a mechanism to support vulnerable groups, more participation can be expected from the groups. Moreover, it can function as a social safety net, without marginalizing any members.</li> <li>- Vulnerable groups are expected to contribute to the CBOs by undertaking the responsibility as a member, such as attending meetings and events and paying subscription.</li> </ul>
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#### 4) Present status of particular CBOs in Jaffna

Major government-registered CBOs commenced the activities. The most important CBOs for community development in the present Jaffna are RDS and WRDS. Cooperative societies, such as FCS and TCCS, and FO have also contributed to village development. Community centre can be utilized for community based activities after the Local Authorities are strengthened enough to support community activities.

Table 2-13 shows the major CBOs' activities and points to be considered in supporting CBOs.

**Table 2- 13: Available CBOs in Jaffna**

Name of CBOs	Community activities	Necessary consideration to support
FCS	- Apart from activities for fisheries, some FCSes have contributed to village development activities such as the operation of a water bowser, support for village events and the management of community banks.	- Capacity building for FCSes is useful to assist not only fishermen but also returned IDPs and WHFs. Fishing industry can provide vulnerable groups with earning opportunities through fishing labour, fish retail and fish processing.
FO	- FOs play a role to support farming communities promoting linkage with the national agricultural service.	- Strengthening FOs and agro-facilities is essential especially in the resettled areas.
MPCS	<ul style="list-style-type: none"> <li>- MPCSs function as a supplying station for dry rations provision.</li> <li>- Most of MPCSs have inadequate management capacity,<sup>29</sup> especially for financial management.</li> <li>- Community people recognize MPCS as a retail shop not as a CBO.</li> </ul>	- MPCS's activity as a CBO was seriously affected during the conflict. It appears that caution may be required to consider the future role of MPCS because of its uncertain financial situation. Weakness of MPCS in competing with private businesses is common. Reviewing MPCS's role and redefining its potential seem to be a national issue.
Thrift & Credit Co-operative Societies (TCCSs)	- About 230 <sup>30</sup> village development type TCCSs <sup>31</sup> are functioning under the TCCS Union as of October 2010.	- Returnees should not be excluded in reforming TCCS.
Other Cooperative Societies	- Cooperative societies for productive activities, such as fruit producing, live	- Those societies should make efforts to include many producers engaging in the

<sup>29</sup> According to the result of hearing survey conducted by the Project in October 2010, only four among 24 MPCSs performed well, whereas three were said to be profoundly troubled. One of biggest issues found in MPCS activity was poor financial management. Weak competition with the private sector was also identified as a serious challenge

<sup>30</sup> There were more than 500 TCCSs in Jaffna before the 1980's, however the number dropped to 195 by 1996 due to the conflict.

<sup>31</sup> There are two categories of TCCSs, one is for institutions and the other is for village communities.

	stock activities and palmyrah producing, carry out specific economic activities.	same activity.
Community Centre	<ul style="list-style-type: none"> <li>- The community Centre was very active before the conflict.</li> <li>- 930 Community Centres were registered and 60–70% is now functioning<sup>32</sup> to some extent. The mandate of Community Centre is to support the operation of common facilities<sup>33</sup> managed by local authorities, including pre-schools and libraries. However, their activity does not make much progress at moment.</li> </ul>	- Reactivation of Community Centre can be promoted when function of local authorities is developed.
Samurdhi Bank Societies (SBSs)	<ul style="list-style-type: none"> <li>- There were 1,969 SBSs consisting of 17,486 small groups who were supported by 211 Samurdhi animators.<sup>34</sup></li> <li>- SBS activity is difficult to link to village developmental activities because SBS members tend to guard their privilege of being a Samurdhi recipient.</li> </ul>	- Awareness on Samurdhi programme is important during transition period; shifting from WFP food assistance to national service for the needy.
RDS and WRDS	<ul style="list-style-type: none"> <li>- 208 RDSs and 271 WRDSs<sup>35</sup> function with support of 15 RDOs.<sup>36</sup></li> <li>- Most of RDSs and WRDSs played a role as field level partners to aid organizations during past ten years. They have experiences in attending various capacity development programme, construction of community infrastructure, promotion of income generation programme and revolving fund facilities.</li> <li>- Most of WRDSs maintain regular meeting and revolving fund facility.</li> <li>- Presently, many RDSs exist only in name. The serious issue for most RDSs is a difficulty in identifying their specific mandate after the completion of village development projects.</li> </ul>	- RDS and WRDS were motivated by donor supported project, but they have increased their dependence on outside support. Their institutional capacity should be strengthened.
Other CBOs	<ul style="list-style-type: none"> <li>- Other CBOs, such as the Youth Club, the Sport Club and Elders' Societies also function. Elders' Societies are engaged in income generation programme and Shuramdana work</li> </ul>	

<sup>32</sup> Source; Department of Local Government, Jaffna (as of June 2010)

<sup>33</sup> Many common buildings, built before the 1980's, still remain in Jaffna.

<sup>34</sup> Source; Samurdhi Authority, Jaffna, (as of October 2010)

<sup>35</sup> Source; Department of Rural Development, Jaffna (as of October 2010)

<sup>36</sup> Four among 15 RDOs are program officers, taking a position as acting RDSs (as of October 2010)



5) Government structures to support for key CBOs for community development

Here are government structures to support key CBOs for community development.

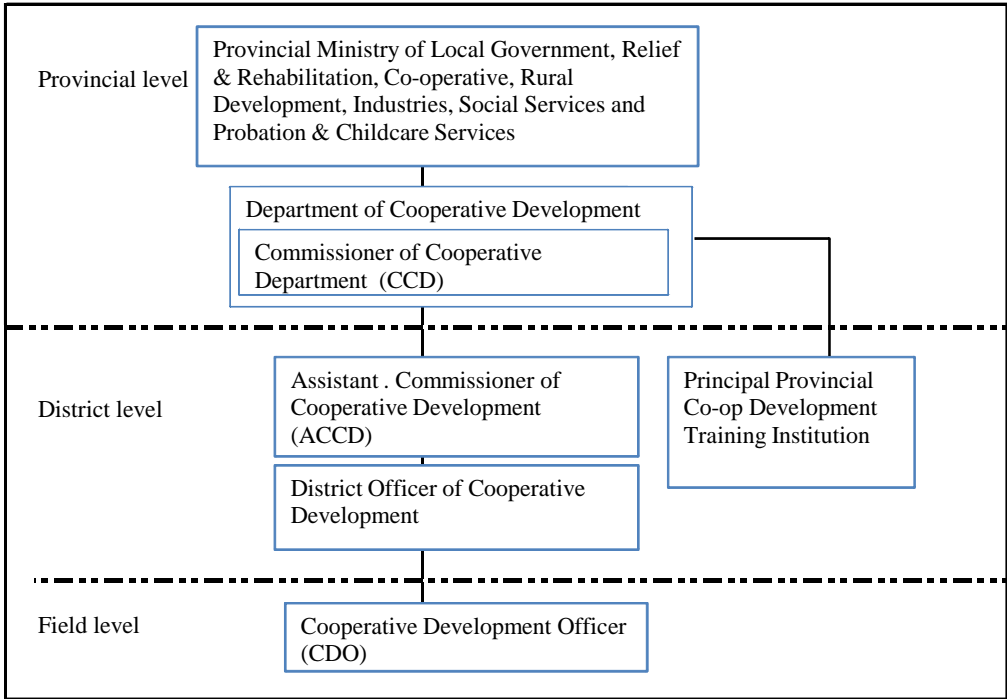
a) Cooperative societies

Cooperative societies are registered with DCD under Northern Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services.<sup>37</sup>

Major supports for cooperative societies by the department are;

- Organize and register cooperative societies
- Provide supervision for cooperative societies
- Perform statutory functions including auditing and inspection.
- Work closely with line Ministries, departments and NGOs.

There are 93 CDOs are assigned now, while 96 CDOs should be positioned. Poor mobility of CDOs is common need. They are not provided with the facility; vehicle or motor bike, to visit field. Technical capacity to facilitate communities is also to be developed.



**Figure 2- 16: Structure of Department of Cooperative Development to support cooperative societies**

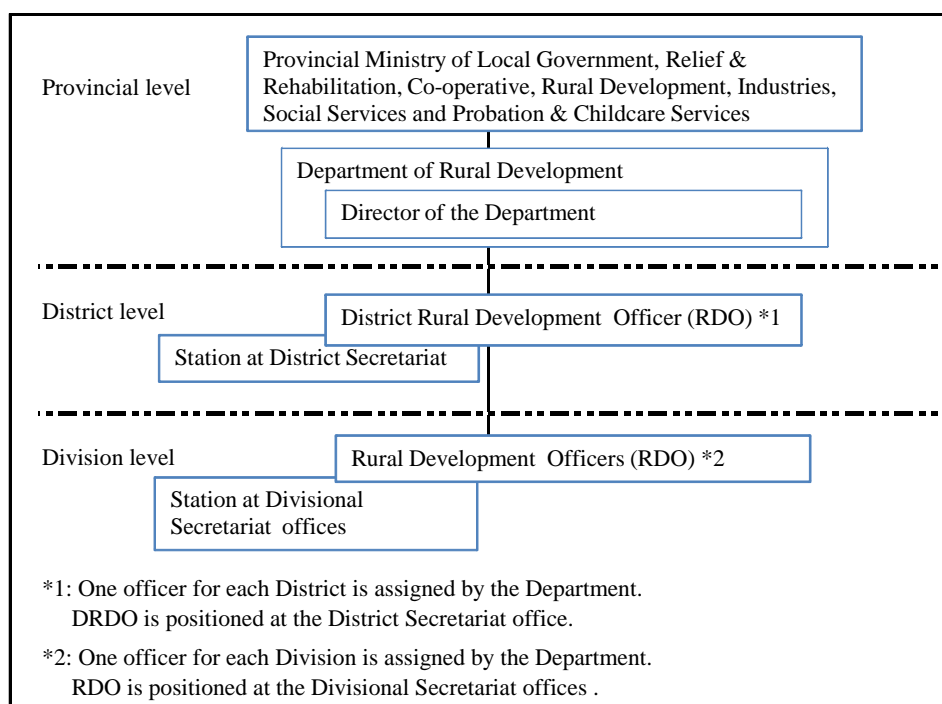
<sup>37</sup> There are five ministries under Northern provincial council. 1) Provincial Ministry of Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services, 2) Ministry of Agriculture, Irrigation, Land Administration, Animal Development and Fisheries, 3) Ministry of Education, Cultural, Sports and Youth Affairs, 4) Ministry of Health and Indigenous Medicine 5) Ministry of Infrastructure

b) RDS and WRDS

RDS and WRDS are authorized by Department of Rural Development (DRD) under Provincial Ministry of Local Government, Relief & Rehabilitation, Co-operative, Rural Development, Industries, Social Services and Probation & Childcare Services. Major supports for RDS and WRDS are;

- Facilitate to establish and strengthen RDS and WRDS
- Assist women’s empowerment and their participation in development activities through WRDS
- Support income generating projects for WRDS in collaboration with other institutions.
- Provide capacity development programme for members of RDS and WRDS
- Create marketing facilities and networks.

The 15 RDOs<sup>38</sup> are assigned at DS offices, but supervising at field level is not enough as there are more than 450 of RDSs and WRDSs. GNs’ support for those societies is so helpful to maintain proper function of RDS and WRDS. RDOs have basic knowledge of community development, but more experience in development activities has to be acquired. Also, if GNs have basic skills in community facilitation, it would be helpful for efficient supervising for RDS and WRDS.



**Figure 2- 17: Structure of Department of Rural Development to support RDS and WRDS**

6) Result of study on WRDS in five selected DS Divisions

The Team conducted a study in 2010 on WRDS in order to identify the current situation and issues related to the pilot projects.

<sup>38</sup> Four among 15 RDOs are assigned as an Acting RDO.

The five selected DS Divisions had a total of 142 WRDSs, and information was collected from society members as well as from the staff of relevant government departments, among them the District Rural Development Officer (DRDO), Rural Development Officer (RDO), Divisional Secretariat (DS), and Grama Niladhari (GN). The Team gathered information pertaining to WRDS members, facilities, activities, institutional capacities, future prospects, and other factors. Please see Appendix 2-1: WRDS Assessment Report for details.

**Table 2- 14: General Features of WRDSs in the Five DS Divisions<sup>39</sup>**

DS Division	No. of WRDSs	No. of Members	No. of IDPs/ Returnees Among Members	No. of WHF Among Members	No. with Own Building	No. with Common Building
Chavakachcheri	46	4,989	147	929	7	10
Point Pedro	34	5,161	420	934	8	6
Jaffna	24	1,594	88	390	4	0
Kopay	27	3,911	129	684	5	6
Velanai	11	703	25	141	1	0
<b>Total</b>	<b>142</b>	<b>16,358</b>	<b>818</b>	<b>3,078</b>	<b>25</b>	<b>22</b>

The above table presents the number of WRDSs, overall members belonging to WRDSs, members who are IDPs/returnees, members who are Women-Headed Families (WHF), WRDSs which have their own building, and WRDSs which use a common building, such as a community centre. The total membership of WRDSs in the five DS Divisions was 16,358, out of which 818 (5%) were IDPs/returnees, while 3,078 (19%) were WHF. WRDSs that owned a building or used a common building account for 33% of the total.

a) Structure and Major Activities of WRDS

WRDS is a CBO designed by the government for encouraging women's socio-economic development. The vision of WRDS is to give women enhanced entrepreneurial skills that would lead to greater livelihood potential. At the village level, the organization also intends to mitigate gender inequalities.

The administrative structure of each WRDS consists of a President, Secretary, Treasurer, Vice President, Vice Secretary, and a minimum of eight committee members. WRDSs are registered at the Provincial Rural Development Department through DS office, obtaining a specified registration number. They open a bank account and hold monthly meetings. The RDO is the government official responsible for supervising WRDSs in each respective DS Division. The DRDO is in charge of all the RDOs in the district.

Major activities of WRDS include providing revolving loans with support from NGOs/donors, engaging in contract works, arranging training programmes supported by NGOs/donors, identifying needs among members, communicating these needs to relevant departments, organizing and participating in cultural and traditional events, holding meetings, and conducting Shuramdana (community) activities, such as the cleaning of communal spaces.

<sup>39</sup> The Team

## b) Challenges of WRDS

At the survey, 88% of the assessed WRDSs appeared to be functional. They held meetings at least once each month with an RDO present. They maintained account books and meeting minutes in the proper manner. On the other hand, most faced challenges in developing members' livelihood potential.

Most leaders and members of WRDSs had few opportunities to receive either higher education or capacity-building training. Therefore, they were not trained to become group leaders. A sense of solidarity tends to be inadequate among them, which made collaborative work difficult. This might partly be due to the several migrations that occurred over the past three decades, as well as other bitter experiences caused by the prolonged conflict that has undermined mutual trust among people. The constitution of WRDS provides to reselect committee members every two years. It can work to reduce a risk to create dominant management by particular leaders, but it also can contribute to the lack of solidarity.

According to the result of survey, unless supported by NGOs/donors, the WRDSs considered that they have not substantially contributed to raising the income of their members. Although 30% of the WRDSs were engaged in some income-generating activities (IGA), in most cases, the amount they earn was too little to support members in a meaningful way. The Revolving Loan Fund (RLF) was more or less the only activity to significantly contribute to livelihood development, and only a few small-scale businesses were observed in the societies.

In short, the lack of facilities, technology, investment, marketing skills, qualified human resources, and general solidarity could be seen as reasons for WRDS inactivity. These factors made it especially difficult for these societies to accommodate the multi-faceted needs of socially vulnerable people, such as IDPs/returnees, WHF, and persons with disabilities.

### **2.5.3 Socially Vulnerable People**

#### **2.5.3.1 Woman Headed Families (WHF)**

##### (1) The Current Situation/Issues

As a consequence of the conflict, there were 31,995 WHF in the district as of August 2011.<sup>40</sup> WHF includes the widows who lost their husbands and women who separated from husbands either legally and morally. WHF consisted about 17% of total families in the district<sup>41</sup>. They were considered socially vulnerable, since many had to rear their children and acted as heads of the households even though they had no work experience. Moreover, their presence in public arenas tended to be restricted, which meant that these women had to struggle against social discrimination as well as economic challenges.

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<sup>40</sup> Department of Social Services of Northern Provincial Council

<sup>41</sup> As a reference, the number and percentage of other districts in Northern Province are follow; Kilinochchi has 7,009 (18%), Manner has 3,488 (8%), Mullaitivu has 3,769 (13%), and Vavuniya has 5,395 (11%) of WHF. The ratio of Kilinochchi District marked the highest among the total number of families.

The Team conducted a survey to 109 members of the Widows' Society in Chavatcuddu, Sandilipay DS Division, one of the target areas for the pilot projects. The survey result is attached as Appendix 2-2: Summary of Widows' Society Individual Survey Analysis. Followings are the main findings from the survey regarding their current situation and issues.

1. **LivingConditions:** Due to the social system and limited resources, most widows live with their married children and relatives. 73% of them were in their 50s or older, so such recourse might be more necessity than choice. In this situation, vulnerability could be worsened by family disputes and the spoiled relationships that so often result. Further, 47% of the members were in one-member families, and most of them were elderly persons who live with other families. 11% of widows could be categorized as most vulnerable: they lived by themselves, and had limited incomes (five widows earned below LKR 2,000, and seven had no income). Some of them were incapable of engaging in IGAs, due to advanced age. 83% of respondents answered that their husbands had already passed away; 14% had been abandoned on account of their husbands' remarriages or other unknown reasons.
2. **Livelihood:** Almost all of the widows were poor and had very limited means of increasing their family incomes. More than 70% of them fell under the poverty line, earning less than LKR 1,000 per month. It constituted the similar figures with the district-wise data, while the widows living with monthly incomes below LKR 1,000 accounted for 74%. But 59% of them reported no income at all, relying on governmental or social and family assistance. The majority of the respondents (60%) were not engaged in any IGAs. 18% were engaged in cigar rolling, followed by 15% who had small-scale businesses. 47% had received livelihood assistance in the past, such as small cash grants for cattle rearing, poultry, and small-scale businesses; nonetheless, they could not develop their IGAs. 59% of respondents indicated a willingness to work.
3. **Assistance:** 99% of the widows identified as natives of Chavatcuddu, and 93% had not been displaced in the last five years. As priority for assistance was given to recently resettled people, these poor WHFs were excluded from both government and NGO support. However, many (48%) answered that livelihood support was their prime need. Among the widows, 42% were PAMA recipients, but the assistance provided thereby was paltry (LKR 100–LKR 210), and seemed even less significant when compared with the present cost of living.
4. **Diseases:** Most of the interviewees (71%, or 77 individuals) were considered to be suffering from diseases such as diabetes, asthma, hypertension, and others. Psychological problems, stress, and low family income were thought to be some of the main contributing factors. Roughly 23% of those 77 individuals were suffering from diabetes and related causes, and another 22% seemed to be dealing with psychological difficulties. One of them expressed that she did not wish to go out nor communicate with others, and she lost her motivation to live because of trauma by losing her husband.

## (2) Needs

The survey analysis showed key differences among the widows, which can be categorized according to vulnerability.

**Table 2- 15: Current Situation and Possible Needs of WHFs**

Categories	Current situation	Possible needs
Most vulnerable	<ul style="list-style-type: none"><li>- No income</li><li>- Cannot work</li><li>- Living alone/Living only with small children</li></ul>	<ul style="list-style-type: none"><li>- Food ration, welfare support</li><li>- Psychosocial care</li><li>- Social support through religious groups</li></ul>
Vulnerable	<ul style="list-style-type: none"><li>- No income</li><li>- Have willingness and capacity to work but not working now</li><li>- Living with family/others</li><li>- Have children to rear</li></ul>	<ul style="list-style-type: none"><li>- Livelihood support through marketing</li><li>- Support breadwinner in family</li></ul>
Spear-header	<ul style="list-style-type: none"><li>- Have income</li><li>- Currently working</li></ul>	<ul style="list-style-type: none"><li>- Institutional development of society</li><li>- Leaders' development</li><li>- Access to microfinance</li><li>- Support in marketing</li></ul>

The “most vulnerable” widows could be those with no income, those who cannot work, and those living alone or living only with small children. It consisted about 26% of respondents. Their needs were identified as food ration, welfare support, psychosocial care, and other social supports. Some expressed that PAMA support did not fulfill the needs to sustain their lives. The “vulnerable” category had no income, had willingness and capacity to work, lived with family or others and had children to rear. It consisted about 35% of respondents. The livelihood support was the prime need to rear their children. The last category was the “spear-headers,” who had income currently and thus also the potential to develop businesses and lead society. It consisted about 39% of respondents. They required institutional development of society, leader’s development, access to microfinance and support to marketing.

### 2.5.3.2 Other Socially Vulnerable People

#### Persons with Disabilities (PWD)

##### (1) The Current Situation/ Issues

There were 4,796 people with disabilities in the district as of November 2010.<sup>42</sup> The number increased from 1,565 in April 2008,<sup>43</sup> resulting roughly threefold PWD. The Jaffna Jaipur Centre for Disability Rehabilitation (JJCDR) produced 4,387 artificial limbs in the 21 years between 1987 and 2008, but limbs were needed in more than 500 cases that occurred between 2009 and 2010. Many of these cases were caused by the conflict, either directly, such as by damage from landmines or shelling, or indirectly, such as by the effects of severe conditions on pregnant women and infants living in refuge, among other conditions. PWD, who needed artificial limbs, could receive support from the government.

<sup>42</sup> Department of Social Services of Northern Provincial Council. The number includes physically handicapped and mentally handicapped. If the blind, mute, and deaf people were to be included in the number, it would be 7,779 in total.

<sup>43</sup> Jaffna Statistical Handbook 2009. The number includes physically handicapped and mentally handicapped.

Although their life was stable with their parents, it may be difficult after lost of their guardians. Some married women with children had to rear them with her constrained conditions. Naturally, PWD experienced more difficulty in securing a livelihood than others. On the other hand, the Team observed some cases with actively involved in livelihood or community activities. One woman gained income by needle work even she had lost her arm. Another old man was busy with agriculture with his one leg, while the other engaged in small business at a market. The cleaning of fish auction halls was handled by PWD at some of the pilot project sites.

## (2) Needs

Many expressed the need for livelihood development. A psycho-social approach to normalization must be taken for those with mental disorders. The normalization of consciousness towards PWD remained to be nurtured.

## **Samurdhi**

### (1) The Current Situation/Issues

There were 52,559 Samurdhi, or poverty-stricken, families in the district as of November 2010.<sup>44</sup> These families received LKR 900 worth of food items per month and engaged in weekly saving with LKR 10 and could receive loans for livelihood-related activities. Livelihood and housing including toilet facilities were main issues they faced. They worked as unskilled labours, and engaging into permanent job was difficult.

Deep poverty existed in certain areas even before the conflict. These areas had poor living environment, insufficient education, weak bonds between community members, unstable means of livelihood, and, often, illegal liquor production. Many children in these areas did not obtain sufficient education as a result of their parents' drinking behaviour and chronic poverty.

## (2) Needs

Despite government support, people had difficulty purchasing enough food. The commencement of livelihood activities was not easy, especially for women who lacked work experience.

### **2.5.3.3 Microfinance**

#### (1) Microfinance in Jaffna

The TCCS (started in 1906) is the oldest microfinance institution in Sri Lanka. By the late 1970s, it had been declining and was re-organized as the TCCS/SANASA societies. After 1980, the government, NGOs and banks launched microfinance schemes that spread widely in 1990s.<sup>45</sup>

Jaffna had the best cooperative banks in Sri Lanka and a strong banking system before the conflict. After the start of the conflict, many bank branches had to be closed down, though they tried to provide continued financial services.

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<sup>44</sup> Department of Social Services of Northern Provincial Council

<sup>45</sup> The government has prepared draft microfinance act since 2007. It has not taken effect yet.

Microfinance institutions, such as SANASA and Sarvodaya Economic Enterprise Development Society, Ltd. (SEEDS), made a certain amount of progress when the cease-fire held from 2002 to 2006. Even during that time, the capacity of microfinance institutions was not sufficient both in terms of the number of institutions and financial capacity.

NGOs and international organizations provided huge amounts of capital to CBOs during the past. This capital was used as a revolving fund to support livelihood measures.<sup>46</sup> This helped to promote small-scale business, but was a weakly sustainable financing system owing to the lack of proper fund management.

## (2) Microfinance institutions

Jaffna's major microfinance institutions are as follows:

### a. TCCS/SANASA

As was explained in 2.1, approximately 230 TCCSs<sup>47</sup> were engaged in microfinance activities with GIZ support.

### b. Samurthi Bank Societies (SBSs)

Clients of Samurthi Bank are mainly Samurthi recipients but non-member clients can also have savings accounts. Members are eligible to apply for loans where the maximum amount ranges from LKR 5,000 for distress loans to LKR 100,000 for self-employment loans. The repayment period ranges from 3 months for distress loans to 60 months for self-employment loans. The interest rate is 14–18%. According to Samurthi Authority Jaffna, the total amount of savings held at Samurthi Bank in Jaffna was LKR 222,698,335 as of October 2010.

### c. Cooperative Rural Banks (CRBs)

CRBs are financial institutions owned by MPCs. There were 87 CRBs in Northern Province (excluding Vavuniya, Kilinochchi and Muraaitive) in 2001.<sup>48</sup> Most CRBs offer loans and savings schemes, while a few CRBs have only the savings system. In general, the available loan amount is between LKR 250 and LKR 30,000 and the annual interest rate is 2–24%.

There is a strained relationship between CRBs and MPCs, as surplus earning from CRBs can be transferred to their respective MPCs. In Jaffna, the management of CRBs show some reluctance to support respective MPCs because most MPCs have financial difficulties.

### d. Commercial Banks

Before 2006, in Jaffna, most of the bank loan schemes targeted the middle class. However, currently, People's Bank, Bank of Ceylon (BOC) and Hatton National Bank (HNB) are promoting microfinance schemes. The government also recommends bank loans for reactivating livelihood measures in

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<sup>46</sup> According to the District Officer for Rural Development, Jaffna, the total of LKR 96,913,297 was donated to RDSs and WRDSs as livelihood revolving funds from 1998 to the present.

<sup>47</sup> As of October 2010

<sup>48</sup> Information source is Microfinance Institutions in Sri Lanka compiled by GTZ/ProMIS



conflict-affected areas. According to the Central Bank of Sri Lanka (CBSL), the leading microfinance agency in Jaffna is BOC. Available microfinance schemes at BOC are shown in Table 2- 16.

**Table 2- 16: Available microfinance schemes at the Bank of Ceylon (BOC)<sup>49</sup>**

Name of loan scheme	Maximum amount (LKR)	Annual interest rate	Conditions	Remarks
Self Employment Loan	200,000	10%	2 guarantors (BOC Bank account holders)	
Seasonal loan for agriculture	100,000	8%	2 guarantors (BOC Bank account holders)	Repayment period is 6 month.
Agro-Livestock development loan	-	8%	2 guarantors (BOC Bank account holders)	
Housing loan	250,000	4%	2 guarantors (BOC Bank account holders)	Ministry of Rehabilitation's scheme application should be sent to DS Repayment period is 10 years
PAMP	Agro - 100,000 Others - 200,000	15%	Progress of Group saving	JICA loan project

In addition to the above banks, the northern office of the Regional Develop Bank (RDB)<sup>50</sup> is supposed to be opened in Jaffna.

e. NGOs

Generally, the target of microfinance activity by NGOs is low-income women who have difficulty getting access to formal financial institutions. Another characteristic of NGO-driven microfinance activity is the group saving system; loans are issued based on a group guarantee. Other common requirements for receiving a loan are 'being a share holder' and 'maintaining minimum saving or deposit amount.' The amounts of loans vary, but most range from LKR 5,000 to LKR 50,000. Some NGOs, like SEEDs, have a system for providing loans for larger amounts.

(3) Poverty Alleviation Microfinance Project (PAMP) II

1) Background

PAMP II, which is one of the JICA loan projects, has been implemented by the CBSL in 14 districts, including Jaffna. The objective of PAMP II is to improve the income level of the poor and enhance a formal, inclusive financial service for them by providing credit for income-generating activities.

2) Procedures for financing for the poor

- Group formation (self-help group)

Beneficiaries are facilitated to formulate groups consisting of 6–10 members. Group members are required to have a weekly meeting to promote unity among members. Field workers help raise awareness of five modules: mission creation (goal setting), group running, saving, group activities and income generation.

<sup>49</sup> BOC, Jaffna (December, 2010)

<sup>50</sup> RDBs had been established by Sri Lanka Government in 1987 covering 17 districts with exception of North and East, aiming to support small and medium enterprise. They were merged into single RDB in 2010.

- Compulsory saving

Group members have to start a weekly compulsory savings programme. The amount of savings can be decided by the group members. The collected amount is deposited into the joint account of the leader and secretary/accountant of the group in a Project Financial Institute (PFI). In addition to compulsory saving, members are encouraged to add voluntary savings.

- Loan application

Lending can start three months after registration in one of these groups. No more than half of the members of a group can take out loans at one time. Others may borrow in two successive stages after initial borrowers have demonstrated a good repayment record for a period not less than four months. Members open individual accounts when they apply for a loan. The maximum loan amount for agricultural, livestock and fisheries purposes in the first cycle of lending is LKR 50,000. This amount can be raised to LKR 100,000 on the second loan if the first loan is repaid successfully. In the case of non-agricultural loans, the first loan can be issued at up to LKR 100,000. The limit of the loan amount will be increased to LKR 150,000 and LKR 200,000 for second loan and third loan respectively. The repayment period is eight months for agricultural loans and 36 months for non-agricultural loans. Currently, the interest rate for these loans is 15%.

- Development Centre (clusters of groups)

Field workers help cluster-groups formulate 'Development Centres' registered with Company Act. Members are expected to contribute by sharing capital. Development Centres are aimed at creating a community-oriented development body, expecting it to function as a 'partner agency' under PAMPII.

3) Projects set up in Jaffna

A Project Regional Office (PRO) is to be established in Jaffna covering the districts of Jaffna, Killinochchi and Mullaitivu. The Central Project Office (CPO) covers areas north of Colombo on a visiting basis.

According to the CPO, the leading PFI in Jaffna is BOC. Two field workers are employed by PAMPII, while 5–6 field workers are to be deployed by BOC. The number of field workers hired by other PFIs was not available.

4) Project progress in Jaffna

CPO told the Team that more than 3,000 groups (18,000 families) and 50 Development Centres were formulated in Jaffna District as of August 2010. According to the Progress Report of PAMPII dated 30<sup>th</sup> October 2010, the total number and amount of issued loans were 2,138 and LKR 104,675,000 respectively.

The Central Bank, Cargills (Ceylon) PLC, together with BOC launched a joint programme to create markets for farmers from Jaffna. Women's groups<sup>51</sup> in Point Pedro have produced palmyrah jaggery products on orders sent by Cargills.

#### (4) Potential and issues of micro finance

Jaffna has a potential for the development of industries, trade and services in addition to primary sector production. The people of Jaffna have a history of saving. Financial institutions have embarked on providing various microloan schemes. Therefore, people in Jaffna have the potential to make good use of the available microfinance schemes for recovering their livelihoods. However, the following issues should be taken into consideration to promote microfinance schemes in Jaffna today.

##### a. Loan facilities for the poor

Even though many microfinance schemes are prepared by banks, there are people who find it difficult to approach formal financial institutions. These people need mobilization to develop saving habits and to learn how to utilize loan facilities. Community-oriented microfinance schemes such as those associated with NGOs and the Women's Cooperative Society must be better tailored in supporting these people rather than bank-oriented financial schemes.

##### b. Importance of mobilization

It seems necessary for banks to strengthen field-support in dealing with microfinance, especially for women in poverty. According to BOC, women tend to borrow the maximum amount for a loan without estimating their realistic financial needs. Also, women participating in PAMPPII do not necessarily understand the meaning of group savings.

##### c. Assuring human resources

According to the CBSL, the quality of managers of branch bank offices is a key factor in determining the level of success of microfinance programmes. The managers are supposed to understand both risks and potential benefits when financing the poor (people who can be future customers). However, both state and commercial banks do not have adequate human resources in the north, a place where a number of new bank branches have been opened amid harsh competition. Field officers and field workers are also inadequate in terms of quantity and quality. Training of human resources that can facilitate microfinance schemes is urgently needed.

##### d. Loan for returnees

Many returnees have yet to settle as they are temporally living in relatives' houses or vacant buildings. There are some returnees who moved and settled after receiving a loan. Assessment of expected recipients is important today.

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51 This women's groups are one of the target community under the Community pilot projects for WRDS.

## (5) Approach to promote microfinance programmes

Some points are useful in promoting microfinance activities, taking advantage of available resources and addressing the weaknesses of the existing scheme. Several types of microfinance schemes are available today, so it is essential to identify a suitable microfinance scheme for a target community. The characteristics to be studied are: systems and conditions of loans, available support at the field level and effectiveness at encouraging self- and mutual-assistance systems. In terms of mobilization, assurance of mobilization is a key factor. Field officers should work closely with communities for the community's institutional development.

## 2.6 Environmental Issues

### 2.6.1 Current Environmental Problems in Jaffna

Some of the environmental issues in Jaffna District are serious enough to require urgent countermeasures. This section highlights the environmental concerns in the district. The discussion on water is largely dependent on the findings of Jaffna Peninsula Water Supply & Sanitation Feasibility Study (2006, ADB).

#### (1) Underground water pollution

Underground water in Jaffna is polluted with saline, nitrogen, coliform, and agrochemicals. Saline contamination is caused by seawater intrusion in the coastal area. According to Carmelita (2009),<sup>52</sup> 44% of the area in the district has medium salinity water, while 47% has high salinity water and 9% has very high salinity water. According to Sutharsiny (2007),<sup>53</sup> the well water throughout Puttur, Chunnakam, Valvettithurai, and Kayts is often below permissible levels of every physical, chemical, and bacteriological property. The well water in Karaveddy and Araly is not suitable for drinking since most of the chemical and physical indicators in these wells exceed Sri Lanka's safety thresholds.

#### (2) Freshwater shortage

Freshwater shortage is also a serious problem in Jaffna. Jaffna is topographically flat, with its highest point just 10.5 m above sea level. Because of this and its high population density, the construction of a large water tank is technically and socially very difficult. The absence of dense forest vegetation also limits the water storage capacity of the soil and accelerates evaporation.

The absolute quantity of water is limited. A rainfall of only 1,399,458 ML per year recharges Jaffna's freshwater supply, with an estimated 534,407 ML per year<sup>54</sup> lost in evaporation and 259,515 ML<sup>3</sup> discharged into the sea. Given an agricultural water use of 112,000 ML per year (ADB, 2006),<sup>55</sup> the maximum available water supply is calculated to be 493,536 ML per year.

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<sup>52</sup> Carmelita Nishanthiny Yogapalan (2009) Geochemical Classification of Groundwater of Limestone Aquifer

<sup>53</sup> Sutharsiny Arasalingam (2007) Status of Drinking water quality of water supply wells in Jaffna Peninsula

<sup>54</sup> Calculated by JICA, based on meteorological data (2002-2009)

<sup>55</sup> Jaffna Peninsula Water Supply & Sanitation Feasibility Study (2006, ADB)

### (3) Soil Salinity

Soil salinity caused by the over-pumping of groundwater is also an issue in Jaffna. Farmers suffer soil salinity more or less throughout the district. Altogether, 16,000ha of land have been abandoned, and some of this has come under the “barren land” category.<sup>56</sup> Even though many irrigation wells are not suitable, these salinated wells are still used because of the water shortage in the district. Salt remains on the soil when the sun is strong. The salinity problem is also caused by over-pumping.

### (4) Surface water and seawater pollution

The contamination of surface water is another problem in Jaffna, which is not equipped with a proper pipe-borne sewerage system or a water treatment system. The wastewater drainage is not separated from the rainwater drainage. Domestic wastewater is discharged directly into open ditches along the roads. Human waste is also discharged into open ditches in highly populated areas. Septic tanks near wells are causing underground water pollution. Flat terrain and tidal movements make water drainage stagnant and results in serious surface water contamination in densely populated areas.

### (5) Flooding

When heavy rain continuously falls in the rainy season, many Jaffna roads turn into rivers. In 2008, flooding destroyed 6,689 houses and partly damaged 14,820 houses because Jaffna’s flat terrain degraded its water discharging ability. In addition, domestic waste often blocked the drainages, and limited underground seepage worsened the flooding.

### (6) Degradation of vegetation

A land use map of the district (1987)<sup>57</sup> indicates that the district has practically no jungle or mangroves. The vegetation in the marshland is limited. According to the Rapid Assessment Study conducted by the University of Jaffna,<sup>58</sup> deep-rooted tree cover made by mangroves, coconut, and palmyrah has considerably declined in Jaffna. The following is a part of the report:

*A substantial loss of green cover has taken place during the last 15 years in the district. Palmyrah, coconut and other deep rooted trees were indiscriminately cut during the conflict. It is estimated by an NGO, Ootru Organisation that deep-rooted tree cover has declined from 35% in 1950 to 18% in 1990 and 11% in 2001. Another estimation published by the Palmyrah Development Board and CCB was that nearly 1,500,000 palmyrah and 200,000 coconut trees were destroyed from 1980 to 2002. The mangroves and marshy vegetation occupied has also been considerably reduced, and this poses various environmental threats such as coastal erosion, groundwater salinity, salt dust etc.*

### (7) Issues in Solid Waste Management

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<sup>56</sup> District Planning Secretariat of District Secretariat Jaffna, 2008, “Jaffna District Integrated Agricultural Development & Extension Programme 2008-2009 Maha & 2009 Yala”

<sup>57</sup> 1:50,000 Topographical map (1987, Survey Department Sri Lanka)

<sup>58</sup> Rapid Assessment Study to Streamline the Planning and Implementation of NEIAP Intervention in Jaffna District Final Report (October 2003, Jaffna University)

Solid waste management is another serious issue in Jaffna. Its estimated waste generation is about 278.5m<sup>3</sup>, of which two-thirds is collected at present.<sup>59</sup> Underground water contamination might be caused by dumping sites located in low areas. Soil covering is not practiced at the dumping sites. There is no waste segregation: medical waste, hazardous waste, and human waste from septic tanks are indiscriminately dumped in the same place. Please refer to the photo of an open dumping site in Jaffna in the photographs of this report.

### **2.6.2 Possible Future Environmental Problems**

If the population of Jaffna District increases and its economic activity intensifies, the problems discussed above will doubtlessly worsen. The freshwater shortage and water pollution will reach critical levels. One positive development is the Water Supply and Sanitation Project, which has just started through ADB financing. See details of the project in section 2.8.2.

There are two lime stone quarries in Jaffna, one near Tellipallai and the other in Kopay. Unless adequate mitigation measures are taken, a serious environmental issue could develop there.

### **2.6.3 Suggestion**

The ADB's 2006 feasibility study suggested the following programmes:

- Establishing groundwater management zones
- Appointing empowered regulatory committees
- Establishing a groundwater modeling and hydrogeological unit
- Rehabilitating saltwater exclusion schemes
- Rehabilitating abandoned minor irrigation schemes
- Introducing modern water saving technologies
- Controlling the extent of agriculture during the dry season
- Conducting research to identify suitable crops
- Minimizing the risk of seawater intrusion
- Modeling studies and data collection
- Capacity building of the Water Board and other water-related agencies

Apart from these suggestions, the following action is necessary to address the environmental concerns:

- Vegetation recovery: some areas should be reserved as forest areas in order to preserve the forest ecosystem; mangrove areas around lagoons should be rehabilitated for the maintenance of the water edge ecosystem.
- Waste management: a waste management system and proper waste dumping sites should be engineered.

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<sup>59</sup> Development Plan for the Urban Development Area of Jaffna (Jaffna Municipal Council Area)-Volume One-Situational Analysis and Development plan & Volume One (Part Two) Development Plan - 2010

## **2.7 Review of Existing Policies and Plans**

### **2.7.1 National Policy and Plans**

#### **Mahinda Chintana (2006-2016)**

“Mahinda Chintana” (or the M/C), which can be translated as “The President’s Thoughts,” is President Rajapakse’s election manifesto, the Vision towards a New Sri Lanka. In November 2006, the GOSL presented a draft of the M/C to the public, including donors who discussed it at the Development Forum in Galle in January 2007. This original M/C aimed to enable Sri Lanka to achieve a number of improvements, including the following:

- Sustained economic growth of around 6%
- Increased per capita income, from USD 1,062 in 2004 to USD 2,053 in 2009
- Reduced poverty ratio, from 15.2% in 2006 to 7.6% in 2010

A socio-economic development strategy for the next decade based on the M/C’s political philosophy was recently formulated with the following goals (among others):

- Consolidating Sri Lanka as an emerging market economy, with more than 8% annual GDP growth
- Doubling per-capita income to USD 4,000 by 2016
- Creating a middle-income economy with a knowledge-based society

All three economic sectors are expected to grow at faster rates than in the past. The targeted average growth rates for the period between 2006 and 2016 are 4% to 5% for the primary industry, 8% to 9% for the secondary industry, and 9% to 10% for the tertiary industry. The revised 2010 M/C covers every important economic sector and social arena and indicates the key concepts in their development.

The M/C also places particular emphasis on the achievement of equitable growth, recognizing that there has been a “perpetuation of income disparities, both among income earners and geographic regions.” To achieve this, the M/C calls for a pragmatic approach combining i) accelerating investment in infrastructure, ii) achieving more equitable development, and iii) strengthening public service delivery, particularly in health and education.

The M/C also plans to achieve more equitable development through accelerated rural development. To this end, the Gama Neguma (“Village Uplifting”) programme was launched. The objective of the Gama Neguma is to convert villages and towns into small growth centers by promoting a holistic approach to infrastructure planning. The proposed model reflects the lessons learned through past development projects. The M/C aims to increase agricultural productivity, thus raising rural incomes, and strengthen the role of the public sector by implementing the strategy.

The M/C believes that investment in infrastructure has been neglected for decades, particularly in power, roads, ports, the water supply, and sanitation, creating constraints on growth and poverty reduction in Sri

Lanka. The M/C also wishes to strengthen public service delivery, noting that the current quality and performance of services do not adequately meet modern development needs. The M/C identifies a number of current challenges, including the insufficient implementation of decentralization and a very high occupancy rate in large hospitals. In education, the M/C aims to promote equal access and improve the quality of basic and secondary education. The M/C explicitly notes the need to improve the targeting of the Samurdhi programme, the largest cash transfer and social assistance programme in the country: “the Samurdhi programme is now in the reform process, with particular attention to the introduction of efficient entry and exit mechanisms.”

The M/C notes the importance of balancing regional development with diversity and provides a detailed explanation of the Uthuru Vasanthaya programme, one of nine province-based development programmes. The MC provides a list of priority development activities for Northern Province. The list includes the following:

- Conducting fast-tracked infrastructure development, such as the A9 and A32 highways and other strategic transportation infrastructure
- Reconstructing major irrigation systems, such as Irnamadu in Killinochchi and the Giant Tank in Mannar
- Developing town centers
- Reconstructing and upgrading essential health and education infrastructure
- Developing the UOJ as a knowledge center
- Increasing the cultivation and productivity of non-rice crops by 30%
- Developing tourism in Mannar, Jaffna, and the Mullative Districts
- Increasing fish production from 15,000 to 50,000 tons

## **2.7.2 Province-Level Policy and Plans**

### **Joint Plan for Assistance for Northern Province in 2011**

On 2 February 2011, the GOSL launched a one-year programme called the Joint Plan for Assistance to Northern Province in 2011 designed to assist people in Northern Province recover and rebuild their lives. The Joint Plan states that the ultimate aim of the plan is to ensure the long-term sustainable development of Northern Province within the shortest possible timeframe. Launched jointly with United Nation agencies and NGOs, the Joint Plan identifies the priority activities and strategies to be undertaken in 2011.

The Joint Plan provides a framework for meeting immediate needs while linking interventions to early and medium-term recovery efforts such as building shelters and homes, supporting agriculture, food security, and livelihood recovery. The plan also includes a wide range of early recovery efforts such as improving health and nutrition, clearing mines to support continued resettlement, improving education facilities, facilitating the supply of drinking water and sanitation facilities, and strengthening civil administration and security measures.



The Joint Plan was developed through a consultative process led by the GOSL through the Presidential Task Force, involving technical Ministries, Northern Provincial Government, GAs, the United Nations and its agencies, and national and international NGOs and donors.

Regular monitoring will be carried out to ensure that assistance is provided only to the people and institutions that most need it and to confirm its conformity with the GOSL's plans and with internationally established principles for such assistance.

The Joint Plan eloquently describes achievements made in Northern Province's agriculture, livestock, and fisheries since May 2009 while outlining the important tasks that lay ahead in 2011.

The following is the essence of the Joint Plan's vision for agriculture, livestock, and fisheries. It is obvious that the basic policy standpoints raised by the GOSL are largely identical to those recommended by the Team in this report for Jaffna District.

#### Achievements in Agriculture

About 80% of recently resettled households in the northern districts were involved in farming before displacement. In 2010, production packages (containing seed paddies, OFCs, and vegetable seed kits) and equipment (such as water pumps and sprayers) were provided to support the resumption of agricultural production in the north. In addition to some 35,000 returnee farm families supported by GOSL-coordinated efforts, donors helped 10,000 IDPs and host families. With the WFP's support, some 70 containers have already been placed at 31 ASCs across Northern Province to store seed paddies, fertilizer, and other agricultural inputs. By the end of January 2011, a total of 155 containers will serve as temporary post-harvest storage as well.

#### Tasks Ahead in Agriculture

While returnees received significant start-up support to resume their farming in 2010, agricultural productive capacity and access to support services continue to be limited. In 2011, therefore, a coordinated effort should address priorities for immediate and long-term strategic support for agricultural sub-sectors, including crop production and protection, water management systems, community and government-based infrastructure and institutional support for agriculture, agricultural support services, agro-processing, quality seed production, storage, marketing, and input supply, all of which were severely affected by the conflict. As Northern Province has significant potential for coconut and palmyrah development in homesteads and the highlands, coconut and palmyrah seedlings will be delivered through subsidy programmes. These activities will reduce the need for food aid, while developing the agricultural production capacity of the farming community and the institutional capacity of agriculture extension services.

### Achievements in Livestock Production

Northern Province occupied a prominent position in livestock production prior to the conflict and contributed to more than 20% of the national production, with over 50% of its population involved in livestock rearing before the conflict. The livestock industry suffered major losses; up to 60,000 of its cattle are strays, posing a significant threat to households, which have a limited capacity to protect their crops from grazing by the stray cattle. The poultry sub-sector also suffered significant losses, but over 3,500 households (with an emphasis on WHFs) were provided with packages to aid in recovery.

### Tasks Ahead in Livestock Production

A significant expansion in 2011 is required to close the identified gap of 19,000 households that still require support. In 2011, support for small-scale rural producers of chicks is necessary to re-stock poultry in the region and upscale alternative income generating activities under the government's poverty reduction strategy. Interventions aimed at the genetic upgrading of breeds will address the low productivity in traditional breeds of cattle, goats, buffaloes, and poultry. Integrated approach programmes will provide improved breeds, complemented by the training and capacity building of the Livestock Breeder Cooperative Societies (LIBCOs), the strengthening of milk collection networks, and the provision of milk chilling centers. In 2011, activities aimed at strengthening the institutional capacity of government livestock service providers (LIBCOs and FOs) will also be prioritized, with the rounding up, vaccination, and redistribution of stray cattle in all districts.

### Achievements in Fisheries

The fisheries sector is the second most important economic sector (following agriculture) in Northern Province. Prior to the conflict, the sector played an important role in the national economy and contributed substantially to employment. The annual catch of over 75,000 tons had been reduced to around 30,000 tons by 2000 and to only 15,000 tons by 2008 (less than 5 percent of national fisheries production), despite having almost one-third (480km) of the national coastline. Fishing communities lost their assets (such as boats and gear) and supporting infrastructure (such as harbors, boatyards, net production facilities, ice plants, and fuel supply stations). Multiple displacements and limitations on fishing hours due to security concerns also negatively affected fishing activities.

In 2010, support to returning fishing communities has been lower than support for agriculture and livestock assistance, due to limited funding and the high costs of replacing fishing boats and gear. Nonetheless, the GOSL and donor interventions produced a supply of more than 50% of the required fishing crafts. Other interventions included the provision of equipment and fingerlings for inland fisheries as well as UNOPS support to upgrade the Pasaiyoor harbor in Jaffna. The FAO and National Aquaculture Development Authority (NAQDA) conducted a detailed assessment of the inland fisheries sector in mid-2010, which indicates priorities for capacity development in the northern aquaculture fishery.

### Tasks Ahead in Fisheries

Much more remains to be done, however, to meet the gaps in asset replacement and redevelopment in the fisheries infrastructure of the north. In 2011, the fisheries strategy should focus on strengthening the capacity of FCSes in fisheries production, storage, minimizing post harvest losses, and marketing. Emphasis should be placed on restoring the institutional capacity of the government's regional and district fisheries service providers and building linkages between fishermen and public- and private-sector service providers. Gaps in asset replacement will need to be addressed, as well as on-shore facilities for cold storage, ice making, marketing, and transportation. Revitalizing the FCSes and women-centered livelihoods will be a priority, as well as additional on-shore infrastructure, such as access roads and community facilities (e.g., net mending and auction halls) and the reduction of destructive practices (e.g., dynamite fishing). In all fisheries interventions, environmental sustainability shall be a chief concern in the mitigation of the negative effects of bad practices and overfishing.

In 2011, support will also focus on enhancing marine capture production through the rehabilitation of up to 50 Fish Landing Centres in Killinochchi, Mannar, and Mullaitivu and the construction of on-shore facilities in all districts, including fishery harbours in Jaffna. Implementation of a comprehensive aquaculture development plan is also required in Killinochchi, Mullaitivu, Mannar, and Vavuniya.

### **Northern Development Plan (Uthuru Vasanthaya or Wadakkin Wasantham)**

The Table below is a summary of Northern Development Plan.

**Table 2- 17: Northern Development Plan (Uthuru Vasanthaya or Wadakkin Wasantham)**

<b>Official Title of the Plan</b>	<b>Wadakkin Wasantham (The Northern Spring) Programme</b>		
<b>Formulated for</b>	The development of Northern Province via de-mining, the resettlement of IDPs, the reconstruction of damaged economic and social infrastructure, livelihood recovery, and employment generation	<b>Formulated by</b>	Provincial Planning Secretariat, Northern Provincial Council
<b>Year of Formulation</b>	2009	<b>Year of Publication</b>	2009
<b>Geographical Coverage</b>	Northern Province	<b>Planning Term</b>	180 days programme/three-year investment programme 2010-2012
<b>Estimated Total Financial requirements</b>	LKR 3,500 million LKR 295 billion (USD 2.7 billion) for the three-year programme	<b>Major Sectors</b>	Resettlement of IDPs, infrastructure rehabilitation, education, agriculture, housing, livelihood facilities, transport, road development, irrigation, spiritual development, poverty reduction programme, etc.
<b>Key concept and Catch word</b>	Revitalization of Northern Province, Northern Blossom		

This Northern Development Plan is to be implemented in two stages, a 180-day programme and a medium-term three-year programme running from 2010 to 2012. The 180-day programme emphasizes de-mining, the resettlement of IDPs, the reconstruction of damaged economic and social infrastructure, livelihood recovery, and employment generation, with a special focus on the Jaffna, Vavuniya, and Mannar Districts, given their prevailing IDP problems. However, all districts are covered by the medium-term programme. In the 2009 budget speech, LKR 3,500 million was allocated to the Plan, out of which LKR 500 million is intended for the Ministry of Resettlement's resettlement activities.

The following is some noteworthy points described in the Plan:

- There is a problem with property rights in this region, which is being dealt with by the Plan's task forces engaged in identifying landowners.
- The generation of livelihoods and employment is being conducted through the Gama Neguma programme, which provides farmers with tractors, seeds, and fertilizer subsidies.
- The plan is designed to connect with national mega-infrastructure projects that link the north and the south, with a special focus on the road development, power, and irrigations sectors.
- The Central Bank of Sri Lanka launched a special loan scheme called The Awakening North. Under it, a maximum of LKR 200,000 can be borrowed at an annual interest rate of 12%.

The three-year investment programme (2010-2012) has the following areas of investment potential:

#### Agriculture Sector<sup>60</sup>

- Farming involving the infusion of advanced technology, seeds production, and the development of high yielding varieties, organic farming, collection, distribution and marketing of agricultural produce, storage and cool room facilities.
- Fishing (deep see, coastal, and inland), dairy farming, poultry and animal husbandry, and ice plants.
- Out-grower schemes, plants and nurseries, advanced technology for pre- and post-harvest management, and plant cultivation.
- Agriculture service centers.
- Research and development.
- Developing clusters of hatcheries along with aquaculture breeding centers in each district.

#### Manufacturing Sector

- SMEs, enhancing value-addition methods, including packaging, industrial parks, and the construction industry.
- Agro-processing, fish processing, textile, garment and accessories, leather products, wood and wood products, rubber based industries, electronic electrical and assembling industries, paper products, chemicals, rubber and plastic, non-metallic mineral products, fabricated metal, machinery, and transportation equipment.

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<sup>60</sup> Additional explanation about the Plan's contents on the agriculture sector is provided in Chapter 3.

- Manufacture of boats and fishing gear.
- Cement and mining industries.
- Modernization or resumption of the KKS cement factory, the Paranthan Chemical factory, the Kantale sugar factory, and the Valaichchenai paper mill.

#### Services Sector

- Tourism, recreation, and the establishment of tourist attractions while promoting ecotourism.
- IT, Business Process Outsource (BPO), and Knowledge Process Outsource (KPO).
- Boat repair and maintaining services, port-related services.
- Transportation linking farmers, factories, and markets, building freight stations.
- Educational and skill development, vocational training.
- Providing banking and financial services (including developing institutions) that provide credit facilities for capital investment to aid the resumption of economic activity.

**Table 2- 18: Sources of funding for Northern Province development programmes**

<b>Name of the Programme</b>	<b>Revised Budgetary Provision (in millions of LKR)</b>	<b>Funding Source</b>
Gama Neguma	828.75	GOSL
DCB	75.00	GOSL
Samurdhi	133.02	GOSL
Jathika Saviya	320.40	GOSL
Uthuru Vasanthaya	2,550.00	GOSL
Foreign Funded Projects	2,659.43	
<b>Total</b>	<b>6,566.60</b>	

## Five-Year Investment Programme (2009-2013), Northern Province

Table below is a summary of the Five-Year Investment Programme (2009-2013), Northern Province

**Table 2- 19: Five-Year Investment Programme (2009-2013), Northern Province**

<b>Official Title of the Plan</b>	Five-Year Investment Programme, 2009-2013, Northern Province		
<b>Formulated for</b>	Identification of development priorities for Northern Province (Relief, Resettlement, Rehabilitation, and Reconstruction )	<b>Formulated by</b>	Provincial Planning Secretariat, Northern Provincial Council
<b>Year of Formulation</b>	No information	<b>Year of Publication</b>	February 2009
<b>Geographical Coverage</b>	Northern Province, Sri Lanka	<b>Planning Term</b>	2009-2013
<b>Estimated Total Financial Requirements</b>	LKR 45.6 Billion	<b>Major Sectors</b>	<ol style="list-style-type: none"> <li>1. Production Sector (Agriculture, Livestock, Irrigation, Small Industries, Inland fisheries, and Tourism)</li> <li>2. Economic Infrastructure (Provincial Roads, Rural Electrification, Land Development, and Transport)</li> <li>3. Social Infrastructure and Social Services (Education, Health, Indigenous Medicine, Social Welfare, Probation, and Child Care Services)</li> <li>4. Community Development (Solid Waste Management, Local Government, Co-operative, Rural Development, Sports, and Cultural Affairs)</li> </ol>
<b>Key concepts and Catch words</b>	Reflects the modest needs of the ministries and agencies for the implementation of their mandated responsibilities in Northern Province after its de-merging from North East Province.		
<b>Remarks</b>	No information is available on follow-up monitoring or revision of the programme.		

### Introduction

Northern Province was de-merged from North East Province in October 2006, and a need was felt for a new investment programme exclusive to the province for the 2009 to 2013 period. Investment requirements were collected from relevant ministries and agencies. Although this programme does not encompass all the province's development needs, it indicates the mandated responsibilities of the ministries and agencies.

The Five-Year Investment Programme identifies the following development priorities:

1. Finding a durable solution to displacement
2. Restoring livelihoods
3. Reactivating services and facilities
4. Rehabilitating infrastructure facilities

5. Developing human capacities
6. Targeting vulnerable groups
7. Establishing good governance

As Section 3.2.4 for the contents of agriculture, livestock and irrigation sectors, this Chapter provide information on other major sectors.

## Industry

### Major Issues

1. The conflict during the last two decades and the tsunami that devastated local industry.
2. The absence of credit institutions like the Small Industries Development Bank or the regional Development Bank that other provinces have (such as Wayamba and Sabragamuwa).
3. The need to market and promote tourism.
4. Wastage of resources and negligence due to poor coordination between government and NGOs in implementing industrial and skill development programmes.

### Priorities

1. Generating rural employment and income.
2. Creating an efficient industrial base through private sector development and poverty alleviation.
3. Providing the necessary infrastructure and institutional inputs.
4. Providing incentives for export development and foreign investment.
5. Developing human resources and technology for industrial development.

## Tourism

### Priorities

1. Restoring livelihoods (through market opportunities, information and linkages, and building knowledge of new options).
2. Diversifying and developing tourist attractions and marketable products.

## Roads

### Priorities

During the programme period, an estimated 1,500km of roads are to be rehabilitated or reconstructed in Northern Province. The Road Development Department will mainly concern the following:

1. Maintaining, rehabilitating, and improving the C and D roads and road structures.
2. Creating private sector opportunities in road construction and maintenance.
3. Improving human and institutional resources for service delivery.
4. Rehabilitating infrastructure.
5. Enhancing accessibility and increasing accessibility investment.
6. Building implementation capacity.

**Table 2- 20: Investment Programme 2009-2013 (in millions of LKR)**

District	Total	2009	2010	2011	2012	2013
		Jaffna	868.00	263.00	298.00	148.00
Kilinochchi	2448.00	125.00	186.00	318.00	863.00	956.00
Mannar	2672.00	249.00	369.00	546.00	716.00	792.00
Mullaitivu	1879.00	69.00	127.00	297.00	490.00	896.00
Vavuniya	1453.00	223.00	420.00	348.00	289.00	173.00
<b>Total</b>	<b>9320.00</b>	<b>929.00</b>	<b>1,400.00</b>	<b>1,657.00</b>	<b>2,476.00</b>	<b>2,858.00</b>

### Rural Electrification

Northern districts have the country's lowest electrification levels; electrification is particularly low in the Mullaitivu, Mannar, and Kilinochchi districts. The province has an electrification level of about 30% (in number of households connected) against a national average of 65%. This lack of development in the north is due mostly to conflict and deprivation. Wind and solar generation can be appropriate sources of re-renewable energy for Northern Province. Solar energy is most appropriate for small, isolated communities that cannot be connected economically to the national grid.

#### Priorities

1. Ensuring access to electricity for households not currently served by the national grid by extending it.
2. Promoting alternative energy sources in remote and rural areas that cannot be served by the national grid.
3. Developing human capacity.

### Land

#### Priorities

1. Resettlement of those displaced by the conflict in their original allotments.
2. Relocating landless IDPs and tsunami victims.
3. Providing subsidies for food production wells in undeveloped LDO allotments.
4. Rehabilitating and maintaining colony roads.
5. Reconstructing Land Administration Department quarters.
6. Institutional development.
7. Alienating and systematically developing state land.
8. Protecting un-alienated state lands coming under the purview of Northern Provincial Council administration.
9. Uplifting the socio-economic status of settlers in settlement schemes.
10. Ensuring land tenure transfers within families.
11. Settling land-related issues amicably and fairly through mediation.
12. Strengthening the capabilities of officers involved in provincial land work.



## Education

There are 1,011 schools in Northern Province. For administrative purposes, the province has been divided into 12 zones comprising 33 divisions. Two Additional Provincial Directors offices in Jaffna and Vavuniya administer these divisions.

### Priorities

1. Increasing enrolment and survival rates in the compulsory education cycle.
2. Caring for displaced students and ensuring their education with minimal interruption.
3. Raising achievement levels through alternative education.
4. Prioritizing language, mathematics, and science.
5. Establishing reading corners (60% of the nation's schools have libraries; fewer than 27% of the province's do).
6. Promoting students' high-order learning skills.
7. Focusing on the "on-site teacher" training programme.
8. Retraining and redeploying excess teachers to subject categories with teacher shortages.
9. Strengthening existing teacher centers and Regional English Supporting Centers.
10. Strengthening internal and external evaluations through the Standard Base Quality Management (SBQM) programme.
11. Expanding monitoring and evaluation at all levels.
12. Conducting human resource development programmes in planning and monitoring for officers and principals.
13. Revamping research and development in provincial schools.
14. Expanding ICT development programmes.

## Health

The administration of health services in Northern Province is decentralized to five regions under the Regional Directors of Health Services. The institutional network links 311 health institutions comprising hospitals with specialist services: the District General Hospital (04), the District Base Hospital (06), the Divisional Hospital (46), and the Primary Medical Care Units (35) are curative care institutions, and the MOH Offices (27), the Gramodhaya Health Centers (111), and the Anti-Malaria Campaigns (5) are preventive care institutions. The Ayurvedha Sector functions through sixty curative care institutions in Northern Province. A teaching hospital operates in Jaffna under the Line Ministry. All provide free health services. There are eight institutions for general administration and 160 preventive care institutions.

### Priorities

1. Improving people's health until it is equal with other provinces.
2. Promoting health services to IDPs living in transit camps with relatives.
3. Enhancing the capacity of the health-care work force.
4. Improving maternal and child health services.
5. Expanding health services to vulnerable groups.

6. Combating malaria, HIV/AIDS, TB, and other diseases.
7. Improving mental health services.
8. Rehabilitating and reconstructing infrastructure facilities.
9. Improving the nutritional status of Northern Province.
10. Reducing the incidence of preventable deaths, especially accidents and poisoning.

### Social Services

Department of Social Services provides valuable services for special needs people in Northern Province. The State Home for Elders in Kaithady, four elders' homes, and six homes for the disabled are maintained by volunteer organizations. In addition, Social Services handles matters regarding PAMA allowance, provides self-employment grants, distributes support equipment to the disabled, assists people suffering from contagious diseases, issues Elders Identity Cards, and provides compensation for disaster damage. Due to prevailing hardships, 75% of the people in Northern Province are living below the poverty line.

### Priorities

1. Setting up entertainment facilities and employment activities for elders and the disabled.
2. Protecting the rights of the disabled.
3. Ensuring equal opportunity.
4. Pursuing construction works.
5. Providing better living conditions for the vulnerable.
6. Networking systems among institutions.
7. Updating databases for better monitoring and quicker decision-making.
8. Organizing activities to ensure better lives for the vulnerable.
9. Providing maintenance to ensure a better environment for the vulnerable.
10. Establishing and strengthening district management.
11. Providing special training to officers.
12. Working with voluntary service organizations.
13. Encouraging beneficiaries to become self-employed, since the amount of PAMA is insufficient.
14. Arranging entertainment for the elderly in seniors' homes who are lonely.
15. Encouraging society to pay special attention to the disabled through awareness programmes.
16. Setting up special training institutions for the disabled.
17. Constructing a dormitory and dining hall in the seniors' home in Kaithady.
18. Providing training to officers and the public on the importance of taking care of the vulnerable.

### Local Government

Northern Province consists of five districts, 33 DS divisions, 28 *Pradeshiya Sabhas*, five urban councils and a municipal council. The prime objective of Department of Local Government is guiding, assisting, and supervising local authorities to ensure the efficient administration of their areas of jurisdiction and the development of health and sanitation. Department of Local Government consists of five regional offices in

the Jaffna, Kilinochchi, Mannar, Mullaithivu, and Vavuniya districts. It also has a municipal council, 5 urban councils, and 28 *Pradeshiya Sabhas*.

#### Priorities

1. Implementing the presidential commission's recommendations.
2. Strengthening council affairs.
3. Improving local authorities' management (their office, staff, assets, and finance).
4. Establishing and maintaining the local authorities' Development and Physical Planning units.
5. Improving the local authorities' construction and maintenance works.
6. Constructing and maintaining the thoroughfares (i.e., roads).
7. Strengthening public health promotion activities.
8. Protecting the environment.
9. Establishing and strengthening public utility services.
10. Confirming public participation and social development.
11. Implementing, promoting, and strengthening community services.
12. Improving economic activities.
13. Promoting indigenous medicine.

#### Investment Requirement

The total investment requirement for the 2009 to 2013 programme period is LKR 45.6 billion. The provincial economy is divided into four major sectors: production; economic infrastructure; social infrastructure; and community development (the remainder is included in institutional infrastructure).

**Table 2- 21: Investment requirements by sector & year (2009-2013)**

Sector	Requirements in millions of LKR						%
	2009	2010	2011	2012	2013	Total	
<b>Production Sector</b>							
Agriculture	21.50	51.01	67.52	81.92	86.65	<b>308.60</b>	<b>0.7</b>
Animal Production and Health	166.83	340.13	268.70	376.50	247.64	<b>1,399.80</b>	<b>3.1</b>
Irrigation	1,691.00	2,029.00	2,638.99	3,167.00	3,800.00	<b>13,325.99</b>	<b>29.2</b>
Industries	122.00	143.40	161.00	181.00	217.00	<b>824.40</b>	<b>1.8</b>
Inland Fisheries	41.00	29.73	45.14	42.37	35.99	<b>194.21</b>	<b>0.4</b>
Tourism	20.00	32.00	53.00	54.00	79.00	<b>238.00</b>	<b>0.5</b>
<b>Sub Total</b>	<b>2,062.33</b>	<b>2,625.54</b>	<b>3,234.35</b>	<b>3,902.79</b>	<b>4,466.28</b>	<b>16,291.00</b>	<b>35.7</b>
<b>Economic Infrastructure</b>							
Provincial Road	929.00	1,400.00	1,657.00	2,476.00	2,858.00	<b>9,320.00</b>	<b>20.4</b>
Transport	2.00	10.50	100.50	50.50	15.50	<b>179.00</b>	<b>0.4</b>
Rural Electrification	35.00	110.00	310.00	310.00	310.00	<b>1,075.00</b>	<b>2.4</b>
Land Development	10.80	10.80	10.80	10.80	10.80	<b>54.00</b>	<b>0.1</b>
<b>Sub Total</b>	<b>976.80</b>	<b>1,531.30</b>	<b>2,078.30</b>	<b>2,847.30</b>	<b>3,194.30</b>	<b>10,628.00</b>	<b>23.3</b>
<b>Social Infrastructure and Services</b>							
Education	505.64	782.64	859.34	907.64	944.74	4000	<b>8.8</b>
Health	272.45	979.75	1,187.85	1,085.85	961.05	<b>4,486.95</b>	<b>9.8</b>
Indigenous Medicine	21.50	36.52	30.89	28.31	21.01	<b>138.23</b>	<b>0.3</b>
Social Services	141.50	261.50	291.00	244.00	232.50	<b>1,170.50</b>	<b>2.6</b>
Probation and Child	89.50	65.50	60.50	51.00	55.00	<b>321.50</b>	<b>0.7</b>
<b>Sub Total</b>	<b>1030.59</b>	<b>2125.91</b>	<b>2429.58</b>	<b>2316.8</b>	<b>2214.3</b>	<b>10,117.18</b>	<b>22.2</b>
<b>Community Development</b>							
Solid Waste	24.00	26.00	28.00	28.00	35.00	<b>141.00</b>	<b>0.3</b>
Co-operative	85.00	107.00	120.00	105.00	95.00	<b>512.00</b>	<b>1.1</b>
Local Government	224.00	248.00	274.00	303.00	365.00	<b>1,414.00</b>	<b>3.1</b>
Rural Development	180.00	190.00	220.00	235.00	250.00	<b>1,075.00</b>	<b>2.4</b>
Sports	15.00	15.00	15.00	15.00	15.00	<b>75.00</b>	<b>0.2</b>
Cultural Affairs	10.00	10.00	10.00	10.00	10.00	<b>50.00</b>	<b>0.1</b>
<b>Sub Total</b>	<b>538.00</b>	<b>596.00</b>	<b>667.00</b>	<b>696.00</b>	<b>770.00</b>	<b>3,267.00</b>	<b>7.2</b>
<b>Institutional Infrastructure</b>							
Building	10.50	25.00	30.00	32.00	40.00	<b>137.50</b>	<b>0.3</b>
Provincial Admin	1,100.00	900.00	950.00	1,000.00	1,250.00	<b>5,200.00</b>	<b>11.4</b>
<b>Sub Total</b>	<b>1,110.50</b>	<b>925.00</b>	<b>980.00</b>	<b>1,032.00</b>	<b>1,290.00</b>	<b>5,337.50</b>	<b>11.7</b>
<b>Grand Total</b>	<b>5,718.22</b>	<b>7,803.48</b>	<b>9,389.23</b>	<b>10,794.89</b>	<b>11,934.88</b>	<b>45,640.68</b>	<b>100</b>

**Table 2- 22: Investment requirements by district, 2009-2013 (in millions of LKR)**

Sector	Jaffna	%	Kilinochchi	%	Mannar	%	Mullaitivu	%	Vavuniya	%	Total
Production Sector	2,399	5.3	5,951	13.1	1,537	3.4	4,811	10.5	1,793	3.9	<b>16,291</b>
Economic Infrastructure	1,081	2.4	2,770	5.7	2,886	6.3	2,211	4.8	1,681	3.7	<b>10,628</b>
Social Infrastructure	1,829	4	1,297	3.4	2,711	5.9	2,184	4.8	2,171	4.8	<b>10,117</b>
Community Development	1,092	2.4	501	1.1	532	1.2	553	1.2	589	1.3	<b>3,267</b>
Institutional Infrastructure	26	0.1	25	0.1	25	0.1	5,237	11.5	25	0.1	<b>5,338</b>
<b>Total</b>	<b>6,426</b>	<b>14.1</b>	<b>10,543</b>	<b>23.1</b>	<b>7,692</b>	<b>16.9</b>	<b>14,995</b>	<b>32.9</b>	<b>6,259</b>	<b>13.7</b>	<b>45,641</b>

### 2.7.3 District Policy and Plans

#### Jaffna District Five-Year Plan (2010-2014)

Jaffna District's Planning Department has formulated this plan as a catalogue of capital investment requirements (or projects) categorized by DS Division, department, and local authority (such as the urban council and Pradeshiya Sabha of Jaffna District). The plan includes as many as 3,181 required investment items, distributed over five years (2010 to 2014). No funding is currently available for many of them, however.

The first listed are 144 investment projects with specific project sites in Delft DS Division. Taking an example from this division, the plan itemizes the 144 projects as follows:

**Table 2- 23: Investment projects in Delft DS Division**

Projects for	No of Projects
Tank renovation and other irrigation	6
Livestock	1
Fishery infrastructure	9
Fishing boats and nets	7
T-wells and water tanks	30
Toilets	2
Community centers	6
Cemeteries	2
Livelihoods	1
Electrical supply	26
Roads	39
Bus transportation	4
Hospitals	4
Schools and other facilities for children	4
Administration offices	3
Total	144

Let us see another example, from the Point Pedro DS Division, which proposes 448 projects:

**Table 2- 24: Investment projects in Point Pedro DS Division**

Projects for	No of Projects
Tank renovation and other irrigation	5
Livestock	19
Fishery infrastructure	16
Fishing boats and nets	41
Market facilities	5
Vocational training	14
Housing	16
Waste management	2
Community centers	30
Cemeteries	10
Livelihoods	10
Electrical supply	3
Roads	148
Bus transportation	3
Hospitals	2
Schools and other facilities for children	20
Administration offices	1
T-wells and water tanks	22
Manufacturing industry	6
Street lights	31
Canals	24
Cultural and religious facilities	17
<b>Total</b>	<b>448</b>

This plan catalogues the details of the local development needs of each DS Division; thus, it is useful to scan it. However, the plan does not prioritize, structure, or integrate the projects. They are unlikely to receive any investment in the short term, given the large number of them and the huge amount of human and financial resources they require.

#### **2.7.4 Local Government Policy and Plans**

Development Plan for the Urban Development Area of Jaffna (Jaffna MC Area)—Volume One—Situational Analysis and Development plan and Volume One (Part Two) Development Plan, 2010

##### Introduction

Based on the GOSL initiative for planned urban development in Northern Province, the Ministry of Urban Development and Sacred Area Development (UD and SAD) together with the Urban Development Authority (UDA) and the National Physical Planning Department (NPPD) reviewed past plans, the current situation in the areas, new development trends, and the future role of the region. Detailed discussions and field visits helped identify key issues, development potential, and the required major projects in each urban center within the overall urban configuration of Northern Province. With the establishment of the Task Force on Northern Development, the Ministry of UD and SAD compiled a

regional structure plan in 2009 and initiated programmes to formulate detailed development plans for identified urban centers in the Northern Region; Jaffna MC was selected as one of the main centers for development.

#### Vision of Jaffna MC Development Plan

To redress the regional imbalance by creating a promising futuristic world-class city in the north to grow with its rich heritage and culture.

#### Development Concepts

1. Preserving the uniqueness of Jaffna.
2. Conserving the historical, religious, and cultural heritage of the area and of the whole district.
3. Ensuring the participation of all stakeholders in the planning and implementation of identified projects.
4. Creating awareness of the proposed programmes, thus forming a consensus among the public.
5. Ensuring that local people are not marginalized.
6. Preferring local people in employment and establishing small industries, hotels, tourism, and other economic activities.
7. Completing an Environmental Impact Assessment of development projects.
8. Reestablishing religious and cultural events to enrich the cultural links between different communities.
9. Implementing precautionary methods to arrest the cultural degradation caused by tourism.

#### Factors Considered for Future Development

1. The National Physical Planning Policy and the plan both identified Jaffna Peninsula as one of the major metro urban centers to be developed in order to enhance urban development in the region.
2. Jaffna makes a significant contribution to the national economy through its agriculture, fisheries, human resources, and tourism.
3. The Uthuru Vasanthaya Programme identifies Jaffna as a major metro urban center to be developed through urban planning.
4. Jaffna's lagoon, sea beaches, and sand dunes have been identified as major tourist destinations.
5. Great potential lies in developing deep-sea fishing and small industries in the region.
6. Jaffna's close proximity to the Indian sub-continent will positively influence its development.

#### Issues identified within Jaffna MC

1. Bus stands in different locations must be integrated with the central bus stand.
2. Lack of proper planning for the two medium-sized "kulams" (ponds) and the small one in the town, potential recreational places and collectors of waste and storm water flow.
3. Lack of proper drainage and garbage disposal systems.
4. Traffic congestion, narrow roads, buildings abutting onto narrow roads; lack of parking facilities, traffic management systems, and color signals.

5. No large or high-employment generating industries in the area.
6. Threat of pollution of groundwater by fertilizers, pesticides, fungicides, herbicides, solid and liquid industrial wastes, petroleum products, etc.
7. Limestone downgrading without adequate water purification capacity.
8. Heavy damage to palmyrah and palm tree coverage due to conflict.
9. Small water supply schemes through small-capacity tanks elevated for only a few hours.
10. About 50% of the people access their water at stand posts from the wells at Thirunelvely and Kondavil.
11. Tap water has a high concentration of sodium, salinity, and nitrate (three times over the permissible level).
12. Lack of public amenities in the city center.
13. Heavy dependence on central and provincial government grants to maintain the MC.
14. Lack of a proper pipe-borne sewerage system.<sup>61</sup>
15. Management of solid waste is being complicated by expanding economic activity and increasing population.

#### Sectors for Development

1. Commercial, educational, medical, and tertiary services.
2. Banking and professional services.
3. Farming, manufacturing, construction, pawn brokerage, transportation, and telecommunication.
4. Traditional manufacturing industries, such as jewellery, tailoring, footwear, and food processing.

#### Proposed Major Development Projects

1. Two beach parks and an international cricket stadium to attract local and foreign tourists.
2. Conservation of the Jaffna Fort and the renewal of urban activities in surrounding areas, including the Durayappah Stadium, the Cultural Center, Beach Park, and improvements to the existing fish market.
3. Development of the city center and commercial complex/transport terminal, including the redevelopment of the market complex, car parking facilities, and hospital complex.
4. Reconstruction of damaged housing and new apartment complexes.
5. Reconstruction of the railway station and the surrounding area.
6. Chaartty beach front development (Mankumpan) and Casuarina beach front development.
7. Ariyalai Market Development.
8. Kallundai waste disposal site, with 50 acres of land for proper sanitary land filling.
9. Composting facility.
10. Re-establishing regional administration by establishing an office and residence for the governor.

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<sup>61</sup> Before 1984, sewage was disposed of through either a bucket latrine or water sealed latrines. In 1984, all bucket latrines were converted to water-sealed latrines through financial incentives under UNICEF. All are now water sealed, with one, two, or three compartment septic tanks. As pipe water is not available, the distances between the wells and the septic tanks become an issue. Pollution has resulted from the salinity increase and liquid waste contacts. Moreover, the biological and chemical pollution of their water compels the local authorities to build a comprehensive sewerage system. However, the huge cost hinders implementation.



11. Reliable twenty-four hour supply of pipe water and individual water connection for all permanent residential units, reducing the number of stand posts.
12. A comprehensive storm water drainage system.

### Capital Requirement

The overall development plan would address the needs of the area and be implemented in three stages up to the year 2030 to achieve short-, medium-, and long-term objectives. The total estimated cost of the implementation of identified projects would be LKR 37,890.00 over 20 years of development, excluding the already committed donor funding programmes connected to Conflict Rehabilitation and Reconstructions work. The three stages break down as follows:

- Short Term (2010-2015): LKR 12,430 million
- Medium Term (2015-2020): LKR 11,040.00 million
- Long Term (2020-2030): LKR 14,420.00 million

The implementation of the identified projects depends on the investment funds available from and committed by government, the private sector, public and public-private consortia, and direct foreign investment. In order to have a continuous implementation, it is proposed to strategize the investment as follows:

- Mega-projects will be implemented by a foreign consortium
- The Board of Investment will identify prospective private sector partners for investment
- Public projects, such as the integrated transport terminal and other infrastructure development projects, will be implemented by the government
- The remaining projects will be funded by local investors

### **Vadamarachichi North Division 2011 Socio-Economic Profile**

### **Islands South Division 2011 Socio-Economic Profile**

### **Valikamam West Division 2011 Socio-Economic Profile**

In June 2011, the above three economic profiles were jointly compiled by the Pradeshiya Sabha, divisional secretariats, and urban councils under the supervision of the Ministry of Local Government, Northern Province.

- Vadamarachichi North Profile was compiled by the Point Pedro Urban Council, Point Pedro Pradeshiya Sabha, Valvettiturai Urban Council, and Point Pedro DS.
- Islands South Profile was done by the Island South Pradeshiya Sabha and Velanai DS.
- Valikamam West Profile was formulated by the Valikamam West Pradeshiya Sabha and Valikamam West DS.

Under a new government policy, the current multiple planning of central and provincial departments working at the local level is to be replaced by a single planning process jointly led by the local authority and the Divisional Secretariat (DS). Therefore, the concerned local government bodies joined forces to prepare the profiles in a pioneering attempt to gather all the important aspects of the individual DS Divisions into one profile, with comprehensive data. These profiles will be used as the basis for a thorough analysis of the issues and problems in each DS Division and are therefore indispensable for proper development planning.

The profiles contain the following chapters: General Aspects, Population, Land Use, Governance and Administration, Economy, Education, Health and Social Services, Transport and Communication, Utility Services, Recreation, Environment, and Security and Safety. Based on these profiles, Integrated Local Mid-term Development Plans will be formulated for each area in 2011 and implemented over a period of four years.

This activity will be technically and financially supported by the German International Cooperation (GIZ) under the Performance Improvement Project (PIP) to assist the implementation of local government reform in Northern Province. The GIZ assistance has been secured for the period from August 2009 to October 2011. GIZ is assisting together with AusAID in Jaffna, Mannar, and Vavuniya from July 2010 to June 2013.

## **North East Local Service Improvement Project (NELSIP)**

### Introduction

The World Bank financed this grant project to improve the accountable and responsive delivery of local infrastructure services by local authorities in Northern and Eastern Provinces. Local authorities in all five districts of Northern Province will benefit from the project. The basic project concept is similar to that of the aforementioned PIP, supported by GIZ. The Ministry of Economic Development is the executing agency, and Northern Provincial Council is the implementing agency. The project's cost is calculated to be USD 86 million (with the World Bank providing USD 50 million, the GOSL USD 34 million, and the beneficiaries USD 2 million). The project will take five years, from 15 July 2010 to 31 December 2015.

### Project Activities

The project will assist three urban councils and thirteen Pradeshiya Sabhas in Jaffna, three Pradeshiya Sabhas in Kilinochchi, four Pradeshiya Sabhas in Mullaitivu, an urban council and four Pradeshiya Sabhas in Mannar, and an urban council and four Pradeshiya Sabhas in Vavuniya. The project will assist their capacity development in terms of infrastructure service delivery, institutionalizing accountabilities, building capacities, project assessment, and evaluation. The components of the project are as follows:

1. Rural services delivery infrastructure network
  - Rehabilitation of economic and social infrastructure facilities
  - Incentive fund for better performing Predeshiya Sabhas
  - Polite programme studies in order to scale up horizontally
2. Strengthening local government institutions
  - Machinery and equipment
  - Partner organizational support
3. Project management and oversight
  - National agencies management
  - Provincial agencies management
  - Technical/financial/social audit

## **2.8 Donor Support**

### **2.8.1 Donor Support in Northern Province**

Out of the total LKR 6,556 million budgetary requirements for projects being implemented under the Northern Development Plan (Uthuru Vasanthaya, LKR 3,907 million is funded by the GOSL, and the rest is funded by the World Bank, ADB, Japan, India, and China and other governments. The following describes some of the important programmes and projects.

In Jaffna District, LKR 148 million has been spent to rehabilitate the Jaffna Lagoon, to construct 14 earth bunds, and rehabilitate barrages. Under education expenditures, many school buildings have been rebuilt. Road improvements are also rapidly progressing throughout the district.

Expenditures made in the Killinochchi District include the reconstruction of schools, the renovation of tanks and canals, and the reconstruction and rehabilitation of roads. In the Mullativu District, the focus has been on the reconstruction and rehabilitation of roads and school buildings. In the Vavuniya District, prime attention has been paid to the reconstruction and rehabilitation of roads and the rehabilitation of tanks in order to allow the farming community to commence its agricultural activities. In the Mannar District, much attention has been paid to the reconstruction of school buildings and the improvement of road facilities.

In addition, LKR 270 million has been allocated to Phase 1 of the Thiruketheeswaram Development Project and a further LKR 155 million to special projects related to resettlement and demining in all Northern districts. This programme also proposes to supply electricity to the whole Northern Province and to accelerate the development of infrastructure improvements.

Five major donors in Northern Province appear to be the World Bank, ADB, India, China and Japan. The World Bank states its policy to aid to Sri Lanka and the conflict-affected Northern Province as follows:<sup>62</sup>

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<sup>62</sup> World Bank Sri Lanka website:  
<http://www.worldbank.lk/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/SRILANKAEXTN/>

*The World Bank Group's current Country Assistance Strategy (CAS) for Sri Lanka, covering the period from July 2008 to June 2012, aligns its support with the government's 10-year Development Framework. The CAS focuses on inclusive and equitable development, improving the investment climate, and strengthening service delivery, with an annual lending envelope of around US\$200 million. This strategy, which was formulated amidst the intensification of the armed conflict in 2007-2008, marked a departure from past practices in its recognition of aid's potential to address not only consequences of the conflict, but also its causes, wherever opportunities arise. The strategy seeks to avoid inadvertently fueling conflict and commits IDA to allocate sufficient resources to conflict-affected areas and populations. The current CAS introduced an instrument called the "Conflict Filter" against which lending operations are reviewed.*

ADB states its policy as follows:<sup>63</sup>

*The core of the government's 10-year development plan is to achieve high growth through investment in large-scale infrastructure, the knowledge economy, and rural development, while developing post-conflict infrastructure.*

*ADB's operations in Sri Lanka in 2011 will be guided by the country operations business plan, 2010-2012, which focuses on infrastructure, including roads, water supply and power, with much of the work in the conflict-affected areas. A new country partnership strategy-being formulated in 2011-is expected to maintain the infrastructure focus but also expand ADB's non-sovereign and private sector operations, including public-private partnerships.*

JICA's policy is stated as follows:

*In Sri Lanka, JICA, as the technical and financial assistance agency of the Japanese Government, has set up the Assistance Programme for Life and Social Environment Improvement in Conflict-Affected Area. Under this Programme, JICA is running two projects in the districts of Jaffna and Mannar<sup>64</sup> in order to draw Road Maps for restoration of people' life through their production activities and livelihood improvement and at the same time, to rehabilitate basic infrastructures. Besides these two projects, JICA is implementing large-scale infrastructure development projects such as the Project for Improvement of Jaffna Teaching Hospital, and the Vavuniya-Killinochchi Transmission Line Project.*

We could not readily find policy statement and alike concerning international assistance provided by the governments of India and China specifically to Northern Provinces.

The following Table shows some of the large externally supported projects in Northern Province:

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<sup>63</sup> ADB Sri Lanka website <http://www.adb.org/SriLanka/strategy.asp>

<sup>64</sup> The Project for Development Planning for the Urgent Rehabilitation of the Resettlement Community in Mannar District.

**Table 2- 25: Donor Support in Northern Province**

Project Title & Duration	Agency & Fund	Subjects	Relevance to the Road Maps
North East Housing Reconstruction Programme II (NEHRPII)	World Bank, EU	The reconstruction of damaged houses	No specific relevance
2004-2011, on-going	LKR 3,9 billion		
Community Livelihood in Conflict Affected Areas Project (Reawakening Project)	World Bank	Restoring irrigation and other community infrastructure and providing village-based training	This project has similar components with reconstruction of tank net work and project for improvement of community infrastructure in the agriculture and community road maps.
2004-2014, on-going	LKR 860.6 million		
Emergency Northern Recovery Project (ENREP)	World Bank, EU	Emergency assistance for IDPs resuming agriculture and fishing, cash for work, and the recovery of infrastructure such as rural road and piped water facility. This project will support the government's efforts in rapidly resettling the IDPs in the Northern Province. Component (A): To provide assistance to returnee households in re-engaging in livelihood activities such as agricultural farming and marine fishing. Component (B): To provide labour employment to the returnees immediately after they have been resettled. Component (C): To provide assistance in repairing, reconstructing, and restoring vital public and economic infrastructure and facilities (irrigation systems, rural roads, drinking water schemes, and public buildings and facilities) damaged by the war. Component (D) Project management, oversight, monitoring, and evaluation. Component A and C are now being implemented.	This project has been designed to pursue the same objective with the agriculture, fishery and community road maps in promotion of resettlement process and meeting the housing needs for IDPs, improvement of infrastructure and productivity improvement.
2010-2011, on-going	USD 65 million		
North East Local Services Improvement Project (NELSIP)	World Bank	Strengthen local authorities, the bottom tier of the government structure in providing services to citizens. The Project will focus on rebuilding small-scale infrastructure such as rural roads, culverts and bridges, and rural water supply facilities.	This project has similar components on promotion of capacity development of government officers and implementation of rural road improvement project which have been formulated in agriculture, fishery and community development road maps.
2010-2013, on-going	LKR 1.3 billion		
North East Community Restoration and Development Project (NECORD II)	ADB, Sweden	Multi sector project.	This project has similar components to the road map of agriculture and community sectors in terms of improvement of productivity and resettlement process to be expedited for all the IDPs to live in permanent houses.
2002-2010, completed	LKR 500 million		
Conflict Affected Area Rehabilitation Project (CAARP)	ADB	Emergency assistance for IDPs resuming agriculture and fishing, cash for work, and the recovery of infrastructure such as rural road and piped water facility	This project has similar components to the road map of agriculture and community sectors in terms of improvement of productivity and resettlement process to be expedited for all the IDPs to live in permanent houses.
2002-2006, completed	LKR 400 million		
Conflict Affected Region Emergency Project (CARE)	ADB	A multi-sector project in Northern and North Central Provinces which consists of sub-projects such as roads, basic utilities, basic social services and infrastructure. About 22,000 people living in the project area will be directly benefited.	This project is designed to pursue the same objective with the road maps of the agriculture, fishery and community sectors for the improvement of infrastructures.
2005-2013, on-going	USD 150 million		
North East Coastal Community Development Project (NECCDEP)	ADB	Emergency assistance for IDPs resuming agriculture and fishing, cash for work, and the recovery of infrastructure such as rural road and piped water facility	This project has similar components to the road maps of agriculture, fishery and community sectors in terms of improvement of productivity and to improve livelihood activities.
2005-2010, completed	Additional funding of USD 20 million in 2009		
Tsunami-affected Rebuilding Project (TAARP)	ADB, Netherland	Rapidly improve the living condition and wellbeing of the significant number of disabled people, repairing damaged roads in tsunami affected as well as conflict affected areas.	This project is designed to pursue the same objective with the community development road maps for the provision of sufficient assistance to meet the basic needs for socially vulnerable groups and PWSN.
2005-2010, completed	LKR 300 million		
Pro-poor Economic advancement and Community Empowerment Project (PEACE)	JICA	Poverty reduction, increase of farmers' productivity, and sustainable agricultural development through the rehabilitation of irrigation facilities, income-generating activities etc.	This project is designed to pursue the same objective with the agriculture development road maps for the improvement productivity and infrastructure.
2003-2012, on-going	LKR 8.5 billion		
Vavuniya-Kilinochchi Transmission Line Project ( I/ II)	JICA	Rehabilitation/reconstruction for the power transmission lines and a substation in northern Sri Lanka	No specific relevance
2005-2012, on-going	LKR 3.8 billion		

## **2.8.2 Donor Support in Jaffna District**

At present, as the emergency aid phases out while the situation gradually normalizes, larger-scale infrastructure development projects are gaining prominence. They include mega-projects pledged by the Indian and Chinese governments. The following is a list of important projects being implemented or to be implemented in the district:<sup>65</sup>

### **Housing**

India finances the first phase of the 50,000 housing project for IDPs in Northern Province. According to the information from Ministry of Economic Development - Reawakening project, Kachcheri the 7,400 houses have been allocated for Jaffna District; 150 houses are now being constructed on a pilot project basis, 2,000 houses will be renovated and remaining 5,250 houses will be newly constructed.

### **Electricity**

The 30MW Chunnakam power station in Jaffna is to provide uninterrupted power to the district. In addition to the 67km Vavuniya-Kikkinochchi 132kv transmission, another 132 kV transmission line is being put up, along with two sub-stations between Killinochchi and Chunnakam in Jaffna, providing electricity from Vavuniya to Jaffna. The cost of the entire project is estimated to be around LKR 6,760 million. Another electricity distribution development project is in the works for 2011-2012. They are all being co-financed by the GOSL and China.

### **Water**

The Jaffna and Kilinochchi Water Supply and Sanitation Project will bring 27,000m<sup>3</sup> of water from the Iranamadu tank in the Kilinochchi District to Jaffna City and Velanai DS, with the financial assistance of USD 90 million from the ADB and an additional USD 30 million from the French Development Assistance. The project started in 2011 and will be completed in 2015.

The new water distribution system will provide access to household connections and metered community water facilities, thus benefiting over 300,000 people after its initial stage and 625,000 people upon full completion. On the sanitation side, funds will be used to build a sewage collection and treatment system for Jaffna Municipality and construct low-cost household and communal latrines in poor communities.

Support will also be given to the Jaffna Water Resources Management Committee to carry out a study and draw up a comprehensive water resources management plan. Assistance will also be given to other resource bodies and local authorities to help them develop groundwater quality and quantity monitoring and management systems and conduct public conservation, environmental protection, and hygiene awareness campaigns.

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<sup>65</sup> Planning Director's Office—Jaffna Kachcheri

The ADB will also provide a grant of USD 1.5 million to implement the Eechchalampattu (Batticaloa District) and Point-Pedro Water supply schemes. The rehabilitation of the Thondaimanaaru barrage is also planned in order to improve the freshwater in the area.

### **Roads**

The widening and carpeting of 33.78km of the Jaffna-Point Pedro road was recently completed with the support of the ADB. China is also financing the broadening and covering of roads in Jaffna Peninsula, with a commitment of LKR 34,000 million. As of 2011, the construction of the Karainagar Causeway, the Jaffna-Point Pedro Road, the Jaffna Kaangkeasanthu (KKS) Road, and the Jaffna Palaly Road is under way. A total of LKR 1,000 million was allocated to each of the roads. It has been reported that the ADB has pledged financial assistance for the construction of the rest of the roads in the peninsula and that this will be soon finalized. (Please refer to the picture titled “Road Construction” contained in the Photographs of this report.)

The rehabilitation of 512km of the Kandy-Jaffna A9 highway and of other roads in Northern Province will be completed by the end of 2013.

### **Bridges**

In February 2011, the construction of the Sangupiddy Bridge (288 m long and 7.4 m wide) was completed with a cost of LKR 1,037 million through a soft loan provided by the UK. This bridge is situated on the A32 highway connecting Jaffna with Kilinochchi. Once completed, the A32 will reduce the travel time from Colombo to Jaffna (110km) by about three hours. (Please refer to the picture titled “Sangupity Bridge between Jaffna and killinochchi” contained in the Photographs of this report.)

### **Railways**

The reconstruction of the rail segment between Omanthai and Palaly (Jaffna) is forthcoming, being financed by India. The Jaffna railway station will soon be reconstructed at a cost of LKR 89 million, in line with the Uthuru Mithuru programme. The Bank of Ceylon (BOC) will provide funds for the Jaffna railway station project.

### **Commercial Harbour**

The rehabilitation work on the KKS Harbour in Jaffna began in July 2011 through the combination of a grant and a loan from India. This rehabilitation project is complex and wide-ranging; it includes the following stages:

- (a) Preliminary Hydrographic Survey
- (b) Wreck removal and disposal
- (c) Dredging
- (d) Geotechnical investigations and preparation of a Detailed Project Report
- (e) Rehabilitation of breakwater/pier and construction of a new pier with attendant port facilities
- (f) Final hydrographic survey and preparation of Harbour Chart

An initial hydrographic survey of the port and its surrounding areas was completed in July of last year. Wreck removal is now in progress. The project will eventually rehabilitate the existing breakwater and pier, construct a new breakwater, and provide ancillary facilities and navigational aids. The wreck removal work is being done as a fully grant-funded project, for which a sum of LKR 2.18 billion (USD 19 million) has been provided by the government of India.

### **Fishing Ports**

Donor assistance for fishing ports and fishery infrastructure will be discussed in Chapter 4.

### **Airport**

Since a private airline withdrew its flight service between Jaffna and Colombo, the Palay Airport has been used only by the air force. Prior to the conflict, however, Air Ceylon had operated Indian flights from the airport since the 1970s. The government may soon begin operating international flights to Tamil Nadu again. India's commitment to improving the Palay Airport is often discussed, but details of the improvement plan are yet unknown.

### **Industry**

It was reported that India will provide LKR 174 million, supplementing the GOSL's own LKR 25 million, of the LKR 199 million required for the Atchuveeli Industrial Estate. India will help upgrade electricity, water, sanitation, and other estate facilities.

### **Agriculture**

Donor assistance in the arena of agriculture will be discussed in Chapter 3.

### **Health**

The JICA's LKR 2,877 million for the teaching hospital located in the center of Jaffna City is scheduled to be delivered by September 2012. This will improve the operation theater complex, the central laboratory complex, central facilities for diagnostic imaging, the emergency department, the outpatients department, and other units. In the meantime, the Indian government has supplied modern equipment for the Intensive Care Unit, the Eye Ward, and the Operation Theater. The total amount of the Indian grant was LKR 112 million.

### **Education**

"ISURU" project worth of LKR 127 million is being implemented by GOSL with the financial assistance of ADB and GOSL. It includes construction of buildings and repairing of damaged structures in five schools of four main education zones of Jaffna. In addition, UNICEF and ENREP also support to repair and build school buildings worth of LKR 41 million and LKR 17 million, respectively.



## Resettlement

As the returnees begin to settle down in the district, their needs increase as they progress towards a normal existence after their time in IDP camps. Donors and humanitarian agencies have been supporting the GOSL's resettlement and reconstruction efforts by providing conflict-affected populations with inputs for resettlement and furthering the early resumption of the returnees' livelihoods. The following table explains the involvement of the different agencies in various sectors.

In addition to the above-mentioned projects, several others have been implemented by international agencies and NGOs. They are mostly humanitarian and are relatively small in terms of financing. The table below summarizes them.

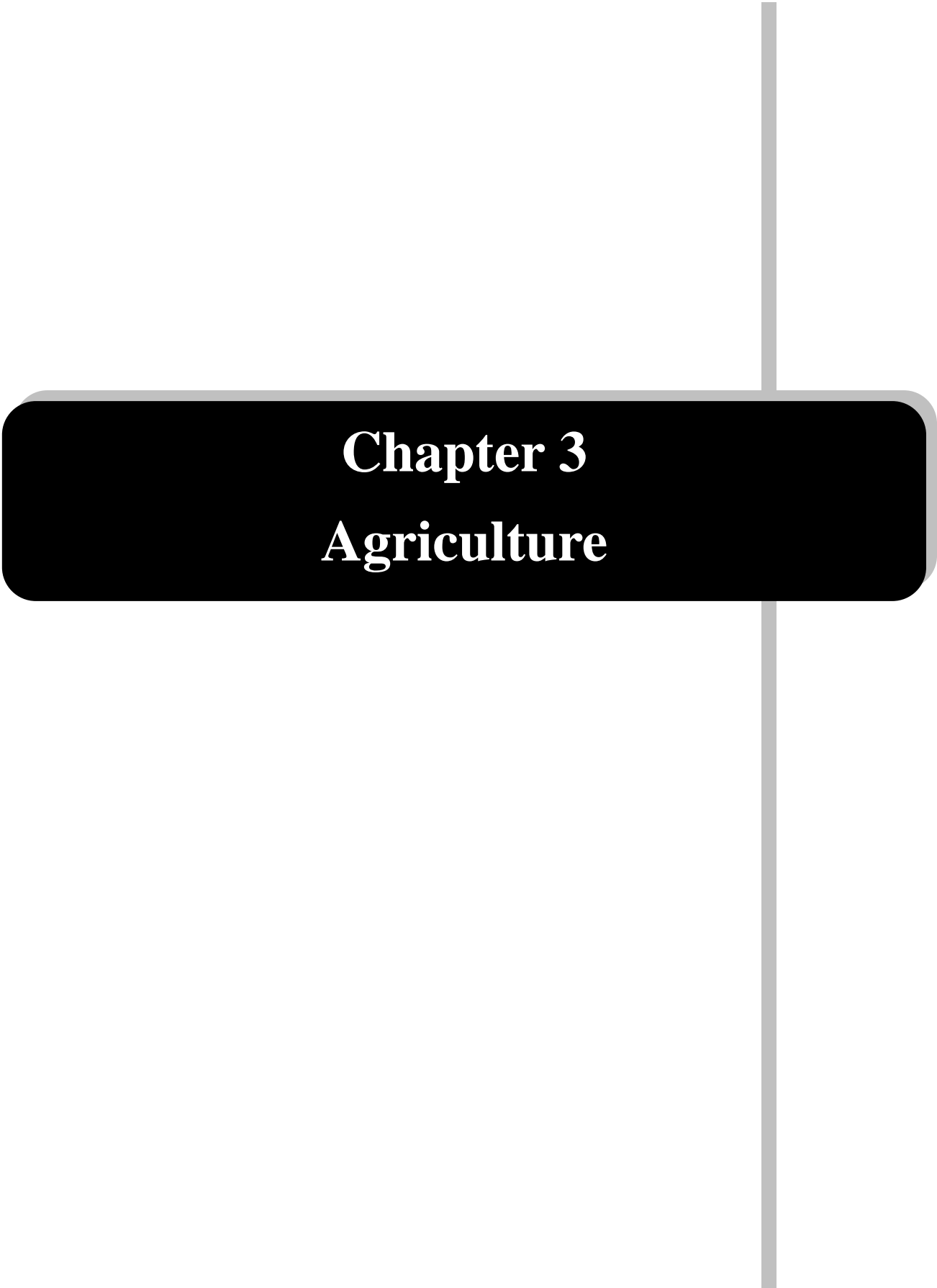
**Table 2- 26: Involvement of other donors in the district<sup>66</sup>**

DS Division	UN and INGOs/NGOs and Other Donors	
	Relief and Resettlement (Nutrition, Shelter and Housing, Water Sanitation and Hygiene, Mine Action, and NFRI)	Livelihood
Delft	FORUT, UNICEF UNHCR, NRC, ZOA, HALO Trust, LJSSS, UNDP, DRC	DRC, ILO, IOM, WFP, ZOA
Velanai	UNHCR, NRC, UNICEF, HALO Trust, LJSS, UNDP, IOM, CHA	ILO, IOM, WFP, UNDP, DFID, BMZ, Embassy of Japan
Kayts	CHA, Christian Aid, UNICEF, WFP, IOM, UNHCR, DRC, DDG, HALO Trust, LJSSS, UNDP, NRC	Christian Aid, ILO, IOM, WFP, DFID
Karainagar	UNHCR, NRC, HALO Trust, LJSSS, UNDP	ILO, WFP
Jaffna	UNICEF, WFP, UNHCR, DDG, HALO Trust, LJSSS, UNDP, NRC, World Vision	ILO, IOM, WFP, UNDP, World Vision
Nallur	UNICEF, WFP, UNHCR, DDG, HALO Trust, LJSSS, UNDP, NRC, Christian Aid, ZOA,	Christian Aid, ILO, ZOA, WFP
Sandilipai	Christian Aid, UNHCR, WFP, HALO Trust, LJSSS, UNDP, NRC	Christian Aid, ILO, IOM, WFP
Chankanai	Christian Aid, UNHCR, WFP, HALO Trust, LJSSS, UNDP, NRC	Christian Aid, ILO, WFP
Uduvil	UNICEF, UNHCR, WFP, DDG, HALO Trust, LJSSS, UNDP, NRC	ILO, WFP
Tellipalai	UNICEF, WFP, Christian Aid, NRC, UNHCR, DDG, HALO Trust, LJSSS, UNDP, IOM	Christian Aid, ILO, NRC, WFP, UNDP
Kopay	Christian Aid, NRC, UNHCR, UNICEF, WFP, DDG, HALO Trust, LJSSS, UNDP	Christian Aid, ILO, IOM, WFP, UNDP
Chavakachcheri	UNHCR, IRD SL, NRC, UNICEF, DDG, HALO Trust, LJSSS, UNDP, WFP, CARE, Christian Aid	CARE, Christian Aid, ILO, LEADS, WFP
Karaweddi	UNHCR, UNICEF, HALO Trust, LJSSS, UNDP, WFP, Christian Aid, NRC	Christian Aid, ILO, IOM, WFP
Point Pedro	UNHCR, UNICEF, DDG, HALO Trust, LJSSS, UNDP, WFP, NRC, UMCOR,	Christian Aid, ILO, IOM, WFP, UMCOR
Maruthankerny	UNHCR, UNICEF, DDG, HALO Trust, LJSSS, UNDP, WFP, NRC, UMCOR, CHA, FORUT	ILO, IOM, WFP, UNDP, PARCIC

<sup>66</sup> UNOCHA 3W Database

Technical assistance provided by other donors in Jaffna includes the following:

- American Chambers of Commerce assisting industrial development in Jaffna through the Jaffna Chamber of Commerce. They recently signed a MOU for this assistance.
- A KOICA grant of LKR 2.7 million to obtain training equipment, machinery, and office automation for the Technical College of Jaffna, a new building that was also constructed through a KOICA grant.
- UNICEF is providing all DS Divisions in Jaffna with financial assistance for differently able children living below the poverty line, children of differently able family heads, children in families headed by women, and children in big families living below the poverty line. Selected families will be given LKR 25,000 each in self-employment assistance. Fifty beneficiaries will be selected in all DS divisions. This project has so far been implemented in Point Pedro, Chankanai, and Chavakachchieri DS divisions.
- The GIZ and AusAID are assisting the capacity development of local authorities such as urban councils and the Pradeshiya Sabha, as discussed in Section 2.7.4 above.
- The National Heritage and Cultural Affairs Ministry is undertaking a project to renovate and preserve national heritage sites in the north and the east. Under this programme, the priority has been renovating the Jaffna Fort at a cost of LKR 104.5 million through a grant received from the government of the Netherlands.



**Chapter 3**  
**Agriculture**

## Chapter 3 Agriculture

### 3.1 Overview

The agricultural sector plays a pivotal role in the gross production of Jaffna District and around 52%<sup>1</sup> of the total population is made up of farming families. There are 62,269 farming families and 30,408 on-farm labourers principally relying on agriculture in Jaffna.<sup>2</sup> As the soil and other climatic conditions are favourable for the cultivation of a wide range of crops, agriculture is tied to livelihood for many people in Jaffna.

#### 3.1.1 Geographical Feature

Because of the Northeast monsoon, Jaffna receives rainfall during October to December as an average of 1,200mm, and annual average temperature is around 28°C.

Six different types of soils are seen in Jaffna Peninsula (Figure 3-1). Well drained and highly productive calcic red yellow latasol soils are found across the central, inland reaches of the peninsula, whereas alkaline salure soil, regasol and alluvial soil deposits are found on outlying islands and in coastal areas.

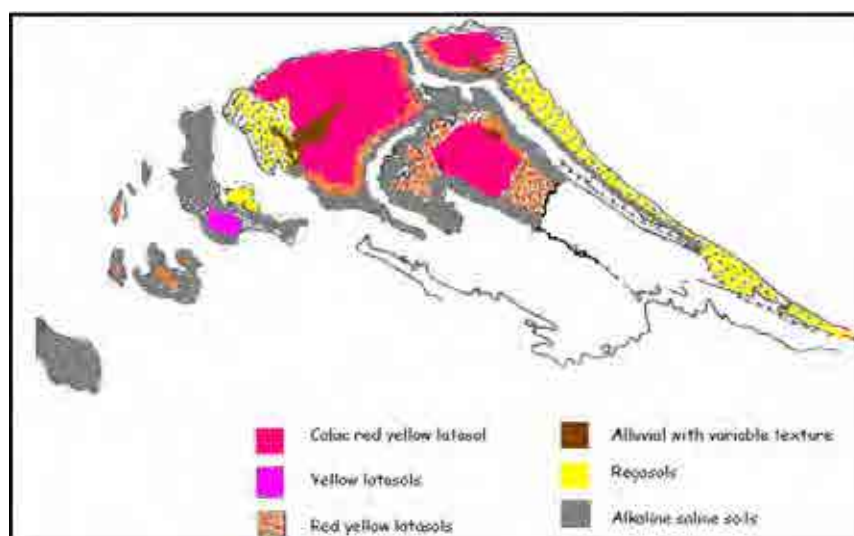


Figure 3- 1: Soils of Jaffna District<sup>3</sup>

The types of cultivated crops differ by area according to topography and soil type. Paddy is cultivated in lowland areas (Figure 3- 2). Vegetables and fruits are found mainly in inland highland areas. Palms, such as coconut and palmyrah, are seen in sandy soil areas along coasts and islands (Figure 3- 3). Livestock are seen all over the district since they are used as an integrated element of the farming system.

<sup>1</sup> District Secretariat (2009). Jaffna district statistical Information, Jaffna district

<sup>2</sup> District Planning Secretariat of District Secretariat (2009). Integrated Agricultural Development & Extension Programme 2009 – 2010 *Maha* and 2010 *Yala*, Jaffna district

<sup>3</sup> Jaffna District Statistical Information, 2006

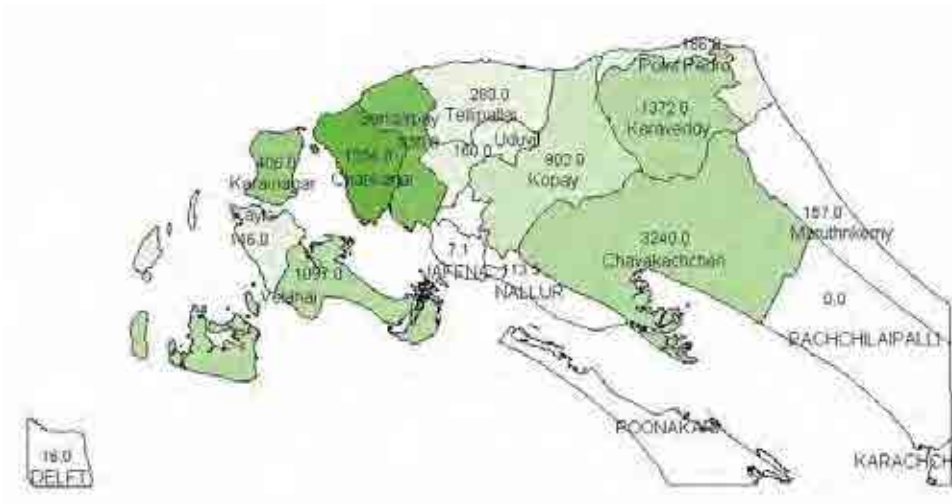


Figure 3- 2: Extent of paddy field in each DS (ha)<sup>4</sup>



Figure 3- 3: Extent of coconut field in each DS (ha) 2002<sup>5</sup>

Jaffna Peninsula depends on rainfall for its groundwater storage. The population of the peninsula depends entirely on the groundwater to meet its agricultural, industrial and domestic needs of water, as there is no permanent river. The kind of shallow groundwater seen in Jaffna Peninsula is called a ‘shallow karstic aquifer.’ Approximately 80% of this groundwater is being used for high-value agriculture.<sup>6</sup>

### 3.1.2 Production and the Impact of the Conflict

Paddy is the main cereal crop, cultivated on 12,224ha, whereas other field crop (OFC) cultivation exceeds 7,500ha. Red onion is the most famous OFC cultivated over 1920ha<sup>7</sup>. Banana is a major fruit crop cultivated in 675ha. In addition, mango (655ha) and grape (88ha) are, after banana, the two most popular fruits cultivated here.<sup>8</sup> Livestock rearing is an integral part of farming and is important for food, manure,

<sup>4</sup> Note: Gradation shows the concentration of paddy fields. Source: The authors, based on District Secretariat, 2009

<sup>5</sup> Note: Gradation shows concentration of coconut tree. Source: Made by authors based on CCB (2010)

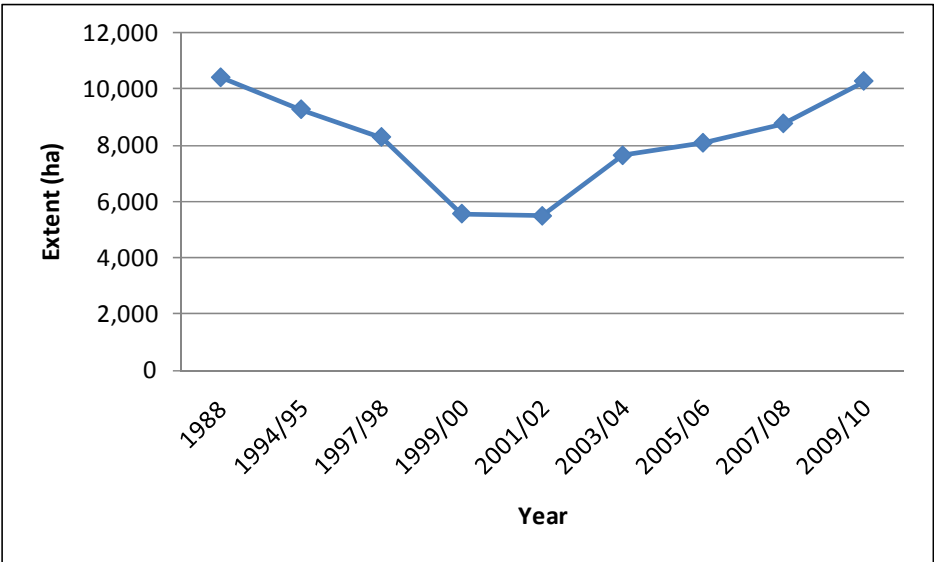
<sup>6</sup> Panabokke C. R. & Perera A.P.G.R.L. (2007). *Ground water resources of Sri Lanka*, Colombo, Water resources board

<sup>7</sup> Ibid, Figure shows the total cultivated area of Maha and Yala

<sup>8</sup> Ibid

draught power, as a buffer in case of crop failure, and also for social and cultural functions. Most farmers rear livestock as an integral element of crop cultivation. Around 11 million litres of milk, 485 tons of meat and 35 million eggs are produced annually.

Due to the conflict, the output of the agricultural sector had declined sharply. Paddy cultivation area dropped from 10,383ha in 1988 to 5,392ha in 1999.<sup>9</sup> Production of red onion dropped from 30,968 tons in 1988 to 5,450 tons in 1995.<sup>10</sup> Extent of coconut land as of 2002 was 12,480ha, but coconut land in 2009 was recorded 63,555ha.<sup>11</sup> The number of cattle decreased from 113,562 in 1984 to only 53,564 in 1995.<sup>12</sup> However, the production in 2009 has recovered and is estimated to be more than 90% of the pre-conflict level: for example, paddy cultivation was recorded at 10,500ha (Figure 3-4), production of red onion recorded 28,960 tons<sup>13</sup> (Figure 3-5)<sup>14</sup> and the number of cattle reached at 96,668<sup>15</sup> (Figure 3-6). Although some perennial crops such as coconut take little more time to recover the pre-conflict level and crops which lost market competitiveness due to market change after the opening of A9 road may not recover at all, it is, by and large, expected that recovery to the pre-conflict level will be attained by 2013 as a whole.



**Figure 3- 4: Change of the extent of paddy cultivation during 1988-2009<sup>16</sup>**

<sup>9</sup> Jaffna District (2003). *Programme framework for resettlement, rehabilitation, reconstruction and development*, -“JAFFNA PLAN

<sup>10</sup> District Planning Secretariat of District Secretariat (1989-2009). *Annual Report of Integrated Agricultural Development & Extension Programme 1989 –2009*, Jaffna district

<sup>11</sup> Coconut Cultivation Board (CCB) (2010). *Development of the coconut industry in the Northern Region*, Jaffna district

<sup>12</sup> Jaffna District (2003). *Programme framework for resettlement, rehabilitation, reconstruction and development*, -“JAFFNA PLAN

<sup>13</sup> District Planning Secretariat of District Secretariat (2009). *Integrated Agricultural Development & Extension Programme 2009 –2010 Maha and 2010 Yala*, Jaffna district

<sup>14</sup> In the figure 3-3, the production of red onion in 2003/04 exceeds the production in 1988. This is supposed to be occurred because of the peace created by the 2002 accords.

<sup>15</sup> District Planning Secretariat of District Secretariat (2009). *Integrated Agricultural Development & Extension Programme 2009 –2010 Maha and 2010 Yala*, Jaffna district and DAPH (2010), *Statistical information*, Jaffna district

<sup>16</sup> District Planning Secretariat of District Secretariat (1989-2009). *Annual Report of Integrated Agricultural Development & Extension Programme 1989 –2009*, Jaffna district

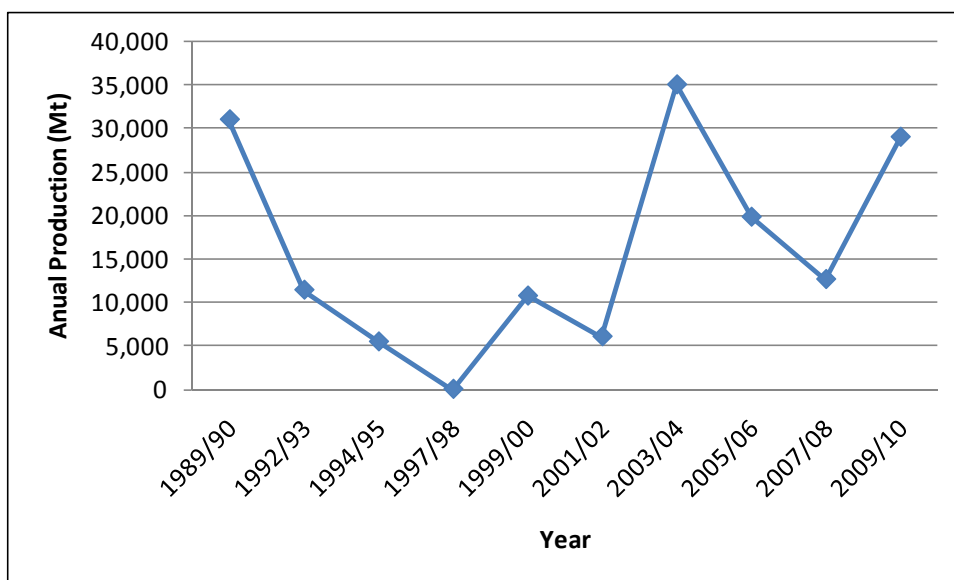


Figure 3- 5: Change of the production of red onion during 1981-2009<sup>17</sup>

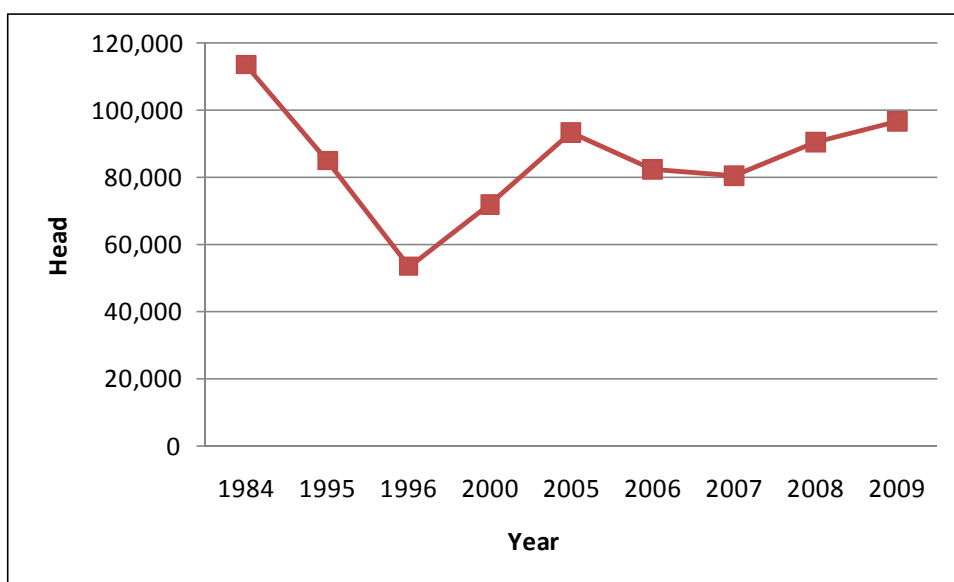


Figure 3- 6: Change of the number of cattle during 1984-2009<sup>18</sup>

### 3.1.3 Water Management Facilities and the Impact of the Conflict

As for irrigation, there are 992 minor irrigation tanks, 23,737 agro wells and 2,433 ditches in Jaffna.<sup>19</sup> These tanks, wells and ditches were not maintained properly during the conflict. DAD listed that 72 minor tanks, 200 agro wells and 250 ditches are heavily damaged and should be given first priority to restore.<sup>20</sup> Among them, 32 tanks have been restored with the support of donors including JICA so far. To prevent the intrusion of sea water into agricultural land, there are 34 salt water exclusion (SWE) bunds in Jaffna. All

<sup>17</sup> Ibid

<sup>18</sup> Jaffna District (2003). Programme framework for resettlement, rehabilitation, reconstruction and development, -“JAFFNA PLAN, District Planning Secretariat of District Secretariat (2009). Integrated Agricultural Development & Extension Programme 2009 –2010 Maha and 2010 Yala, Jaffna district and DAPH (2010), Statistical information, Jaffna district

<sup>19</sup> DAD (2007). *Minor irrigation tanks inventory list*, Jaffna district and DAD (2010). *Renovation of Agro wells and ditches to increase food production – project concept paper submitted to PDP-Jaffna*, Jaffna district

<sup>20</sup> Ibid

of them were damaged during conflict era. Among them, 17 bunds have been renovated. Three lagoon desalting schemes are going on, which will be able to convert 4,400ha of saline land to agricultural land.

**3.2 Concerned Institutions**

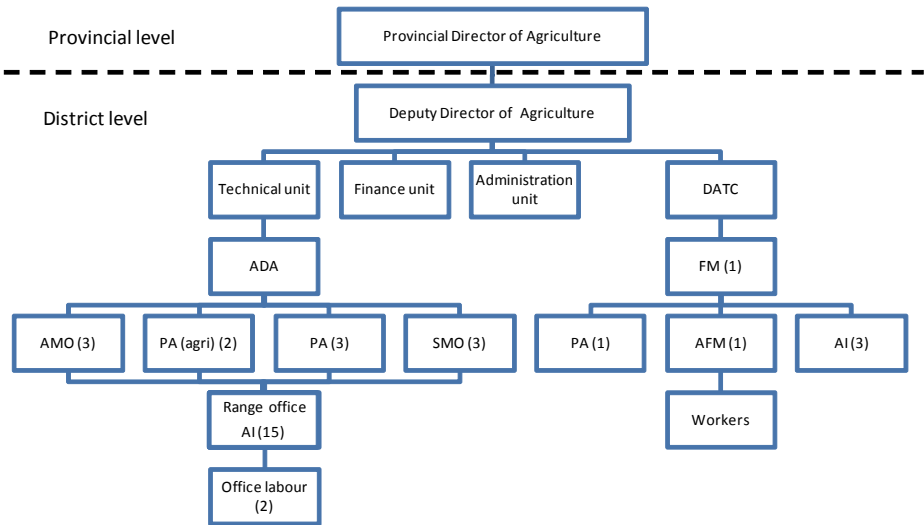
**3.2.1 Government Support to the Agriculture Sector<sup>21</sup>**

There are several governmental agencies administering and supporting to the agriculture sector in Jaffna. Major agencies directly concerned with farmers are DOA, DAD, DAPH, CCB and PDB. DOI and University of Jaffna are also taking important role in the sector.

(1) DOA

DOA takes responsibility for agriculture education and extension for farmers. Agricultural Instructors (AIs) carry out the extension and training activities at the grass-roots level under the supervision of the Deputy Director (DD) of Agriculture with the assistance of Program Assistants (PAs) and Subject Matter Officers (SMOs). Extension methods commonly used are demonstrations, out-station training, field training, training at the District Agricultural Training Centre (DATC), field days, paper articles and farm broadcasting services. Several training programmes are conducted for farmers at DATC, but DATC lacks the latest training equipment and facilities. The number of qualified trainer is not sufficient either to meet the present training needs. AIs’ knowledge is also rather outdated. Thus, DATC tends to be unable to provide quality training on the latest technologies.

Ministry of Agriculture and Provincial Department of Agriculture are the superior authority at the central and provincial level. The central government provides staff training once in three month. However, only few staff can participate from the province.



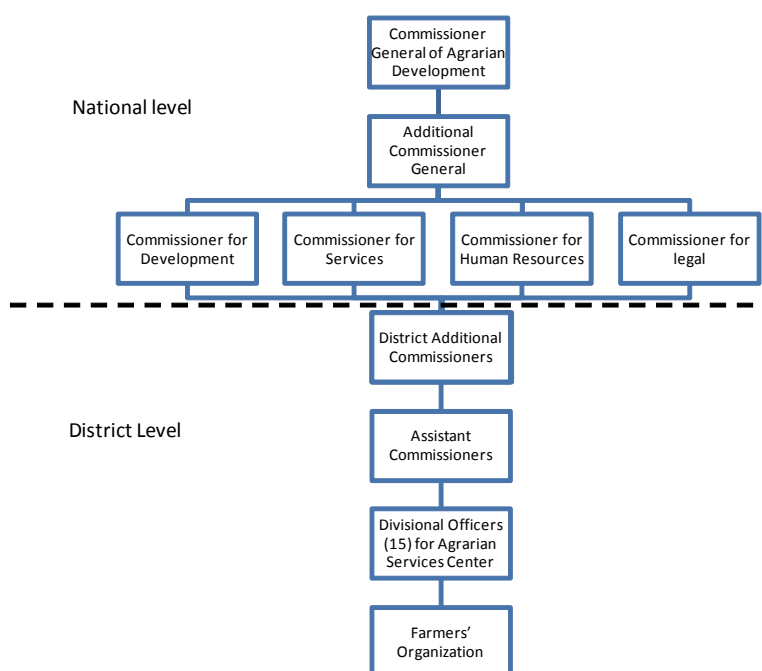
**Figure 3- 7: Organizational chart of Department of Agriculture (Extension)**

<sup>21</sup> Please refer to Appendix 3-5 for more information



(2) DAD

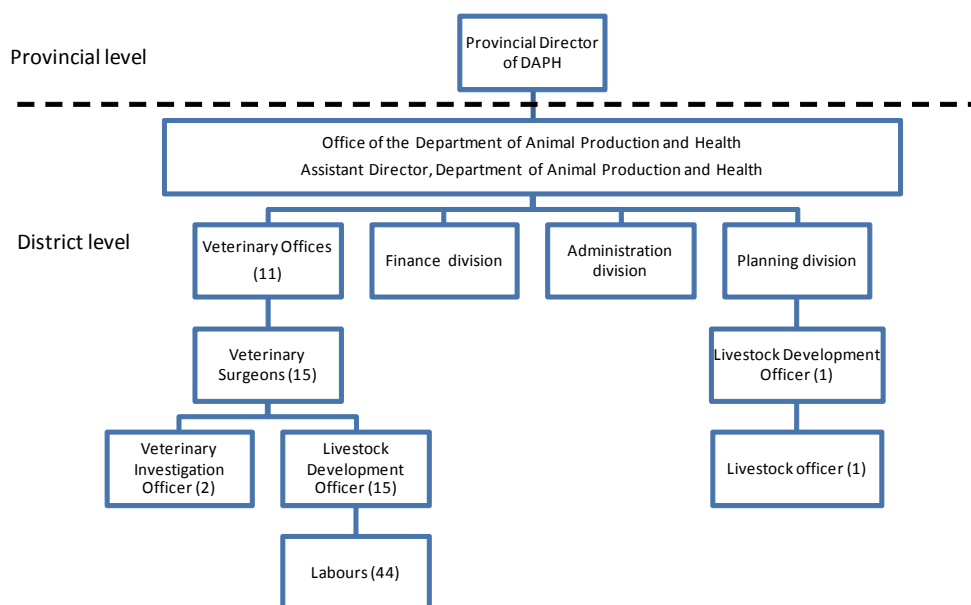
DAD carries out the activities of agrarian and agriculture development; activities concerning the work plan of 'Let us cultivate and uplift the nation'; confirmation on efficient utilization of agricultural lands; registration of high lands and low lands; the supply of agricultural inputs like fertilizer, seeds, agricultural chemicals and machinery under the annual agriculture work scheme; registration of FO; training to farmers; and data collection on agriculture and provision of the data to the statistics departments. There are 14 ASCs carrying out DAD activities at the field level in the district. Lack of staff is one of the problems for DAD to perform effectively. There are 435 vacant in DAD and it needs to be filled. The other institutional issue is concerning its office building. DAD does not possess own office building; it is temporarily functioning in Nallur Agrarian Services Center.



**Figure 3- 8: Organizational Chart of Department of Agrarian Development**

(3) DAPH

Eleven Veterinary Surgeon (VS) offices in the district provide considerable services to farmers at the grass-roots level. Normally there will be one LDO (Livestock Development Officer), one assistant LDO, one dispensary labourer and one labourer in a VS office. Extension services are normally provided on management system for different livestock, disease prevention and vaccination, disease outbreaks, etc. Other supporting facilities belonging to DAPH include the veterinary hospital, Jaffna, the Artificial Insemination (AIns) Center and the Regional Poultry Farm and Hatchery. Most of the facilities are old and need renovation.

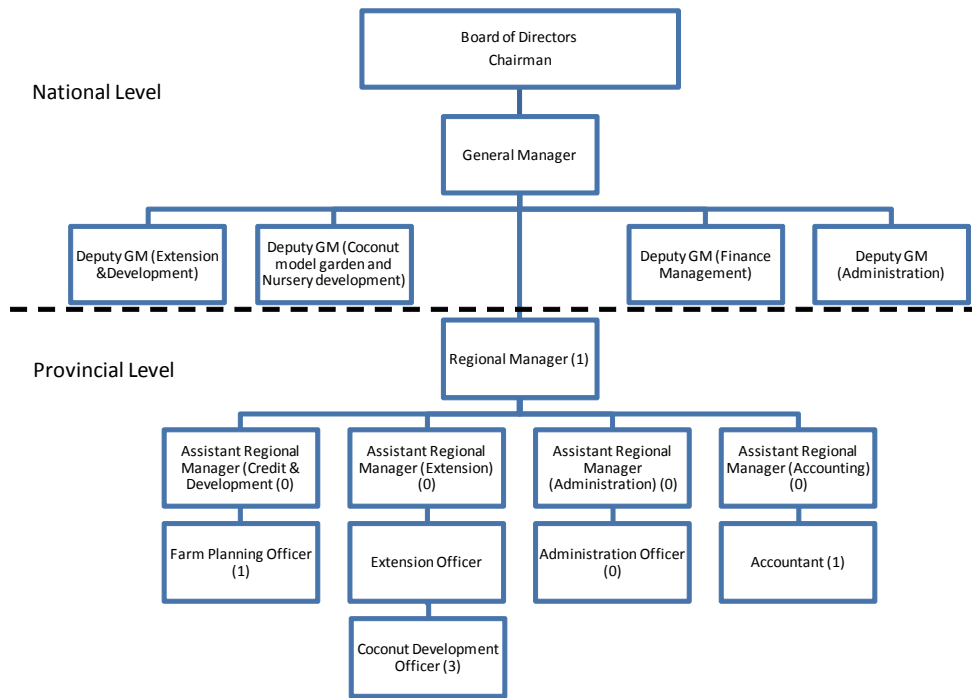


**Figure 3- 9: Organizational Chart of Department of Animal Production and Health**

#### (4) Coconut Cultivation Board (CCB)

CCB is a state organization created to promote growing and upkeep of coconut lands and potential lands suitable for coconut. The regional office of CCB located in Jaffna is functioning for increasing coconut production quantitatively and qualitatively, introducing coconut based farming system, and providing effective and efficient extension services to coconut farmers. The Northern Province contributed approximately 5% of national coconut production per annum during conflict period, but the prolonged conflict drastically reduced the production below half than the previous level. Especially in Jaffna around 75% of total coconut cultivation was destroyed. To step up the recovery of coconut production, CCB has four coconut nurseries in Northern Province to supply genetically superior seedlings.

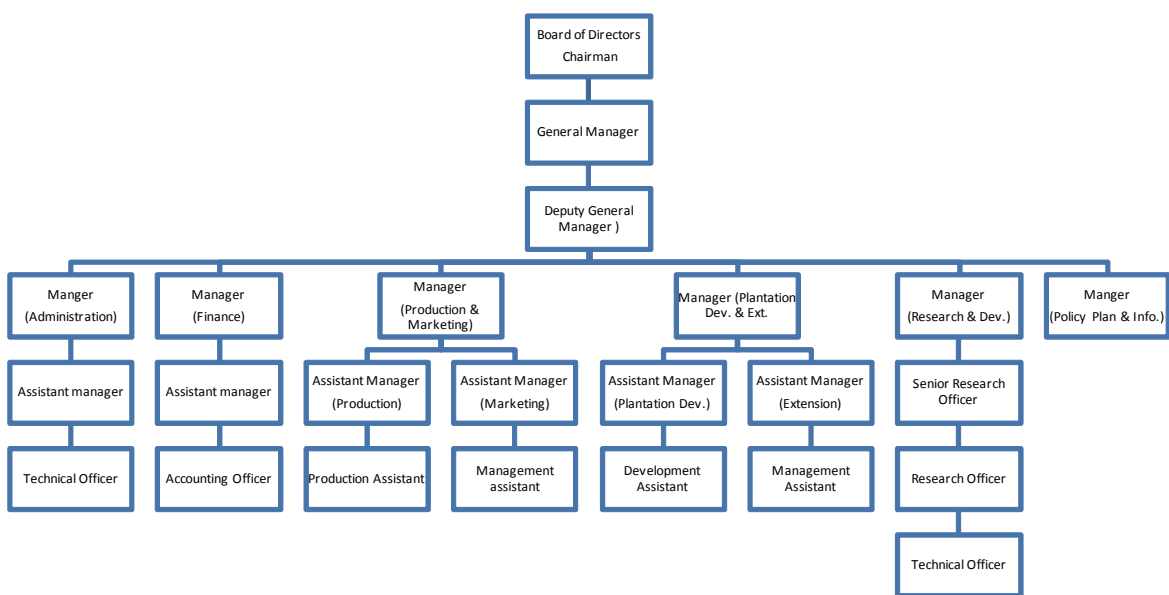
Among them, the Atchchuvely Coconut Nursery had played a major role to supply genetically superior seedlings throughout Northern Province, but it was badly damaged and was not functional for a long period. However, from the year 2008 this nursery managed to resume functioning with very limited infrastructure. To recover the production of coconut to pre-conflict level, the rehabilitation of this nursery is essential and thereby selected as a pilot project.



**Figure 3- 10: Organizational Chart of Coconuts Cultivation Board**

(5) Palmyrah Development Board (PDB)

PDB was established in 1978 as a key institution responsible for palmyrah (“the tree of life”) production and its development in Sri Lanka. It monitors the palmyrah industry from the cultivation stage to the point of production and marketing. It conducts research and extension services. The head office of PDB is situated in Jaffna and its main objective is to implement programmes that would help uplifting the community dependent on palmyrah for their livelihood especially in the North and East. Currently PDB is carrying out a replanting programme to increase the stock of palms through palmyrah model farms and also promote the public to plant palmyrah.

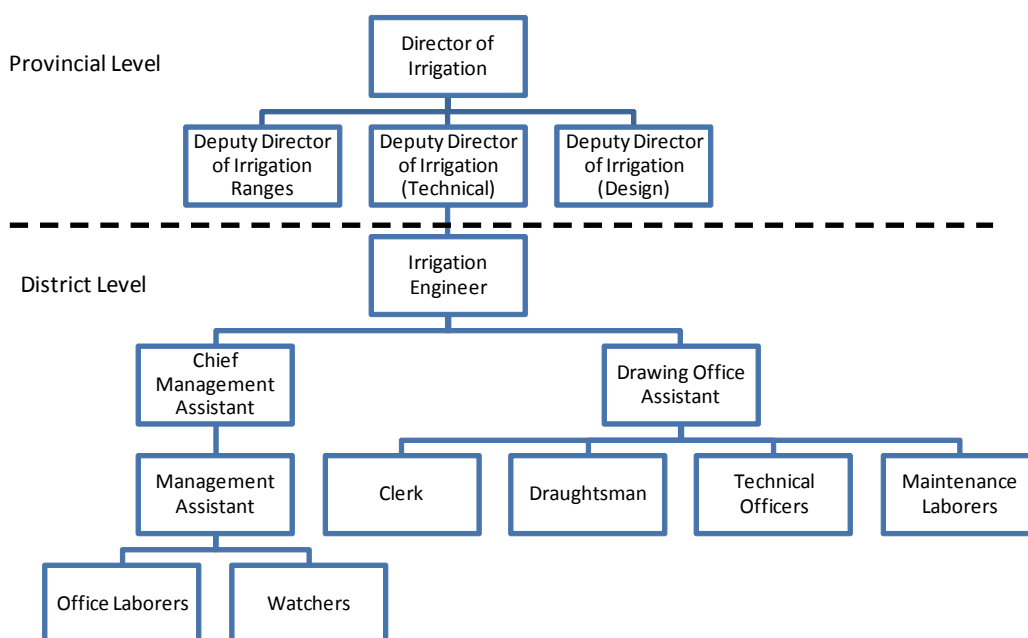


**Figure 3- 11: Organizational Chart of Palmyrah Development Board**

(6) DOI

DOI is the principal organization responsible for the regulation and control of inland water. DOI is responsible for planning, design, construction, operation and management of all large- to medium-sized irrigation schemes along with works concerning flood control, drainage and salinity exclusion.

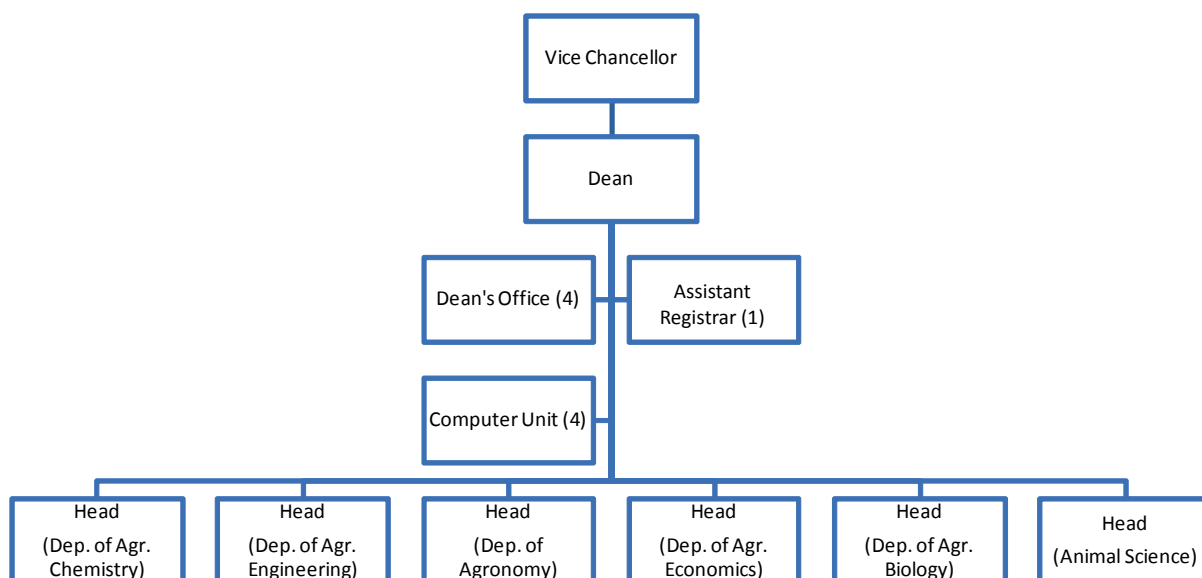
There is no major irrigation scheme in Jaffna. Valukkai Aru, Vadamaradchchi Lagoon Scheme, Uppaaruu Lagoon Scheme and Elephant Pass Lagoon Scheme are some of the large salinity exclusion works carried out by DOI in Jaffna. About 4,400ha of land bordering the Vadamaradchchi and Uppaaruu lagoons are uncultivable at present as they are saline. If these become freshwater lagoons and salt is leached out of the soil, farmers will be able to cultivate this land with cash crops and paddy. Converting Elephant Pass Lagoon into a 77km<sup>2</sup> fresh-water lagoon will open up new agricultural possibilities on both sides of the lagoon - Jaffna Peninsula to north, as well as the Vanni side to south.



**Figure 3- 12: Organizational Chart of Department of Irrigation**

(7) University and College

The Faculty of Agriculture, University of Jaffna (UOJ), was established in 1990 in Kilinochchi. In 1997, the faculty moved temporarily to Jaffna because of the conflict situation and is now functioning in Thirunelvely, Jaffna. Six departments offer courses, namely, Agronomy, Animal Science, Agricultural Engineering, Agricultural Chemistry, Agricultural Biology and Agricultural Economics. The four-year study programme leads to a Bachelors Degree in Agriculture. The Jaffna College of Agriculture, located in Maruthanaarmadam, also provides education in several areas of agriculture and awards a diploma certificate. This collage is a private school.



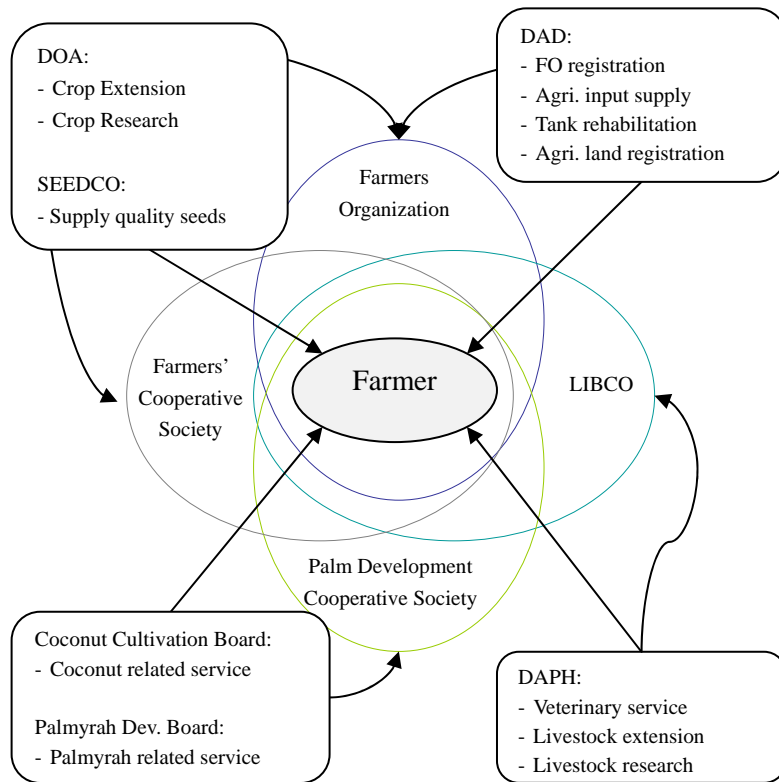
**Figure 3- 13: Organizational Chart of Faculty of Agriculture / University of Jaffna**

**Table 3- 1: Number of staff member of departments in Faculty of Agriculture / University of Jaffna**

Positions under the Heads	AEN	AGR	AGB	ANS	AEC	ACH
Senior Lecturer	3	2	1	1	1	2
Lecturer	0	1	1	1	3	1
Demonstrator	2	2	2	2	2	2
Tutor	0	0	0	0	0	0
Technical Officer	2	2	1	1	1	1
Technical Assistant	1	2	1	1	1	1
Labourer	1	1	1	1	1	1

AEN- Agricultural Engineering; AGR – Agronomy; AGB – Agricultural Biology; ANS – Animal Science; AEC – Agricultural Economics; ACH – Agricultural Chemistry.

Figure 3- 14 below shows relation among supporting agencies, CBOs and farmers. DOA, DAD, DAPH, CCB and PDB are supporting farmers and respective CBOs in each relevant field directly or indirectly.



**Figure 3- 14: Governmental Support to the Farmers**

### 3.2.2 Donor Support in the Agriculture Sector

According to the quarterly report of the district secretariat released in April 2011, major donors supporting the agriculture sector were the World Bank and the Asian Development Bank (ADB).

The World Bank was conducting two loan programmes named “the Emergency Northern Recovery Project (EnRep)” and “the Reawakening Project (Rap).” EnRep’s support to the agriculture sector was in the form of tank renovation as well as the construction of three ASC buildings and two irrigation unit offices, for which an amount of LKR 62 million was allocated. Rap’s support consisted of the renovation of 12 sets of tanks and canals, for which around LKR 108 million, in total, was allocated.

The ADB financed “the Conflict Affected Region Emergency Project (CARE).” CARE’s contribution to agriculture sector was for the rehabilitation of five salt water exclusion bunds, for which LKR 76 million was budgeted.

The Food and Agriculture Organization of the United Nations (FAO) conducted a project named “the Coordinated Agricultural Recovery for Displaced Returnees to Kilinochchi, Mullaitivu, Vavuniya, and Jaffna” from July 2010 to June 2011; its budget was USD 1 million and was financed by the Swedish International Development Cooperation Agency (SIDA). For this project, the FAO distributed paddy and vegetable seeds, fruit seedlings, chicks, tools, and equipment to the farmers.

FORUT, CARITAS, World Vision, and some other NGOs are currently providing agricultural assistance to IDPs and returnees though detailed information about those activities is not immediately available, It is assumed that their budgets are relatively small.

### Relationship with the Road Maps for Agriculture Development

The support by the World Bank and ADB covers major required actions for water management. Emergency agricultural assistance to IDP and returnees has been provided by FAO and NGOs, though its volume is gradually being reduced. Therefore, the Road Maps for Agriculture Development presented in Chapter 9 of this report do not include these ongoing project supported by the donors.

### **3.2.3 CBOs in the Agricultural Sector**

The existence of successful agricultural CBOs is an essential factor for agricultural development, especially since the majority of farmers are small holders, which is typically the case in Jaffna. The Team made an inventory of the following four selected DS Divisions:<sup>22</sup> Point Pedro, Chavakachcheri, Kopay, and Velanai, which are, more or less, geographically representative of the majority of the agricultural areas in Jaffna District. Point Pedro is located in the northern area of the district; Chavakachcheri in the southern area; Kopay is centrally located; and Velanai is an island area. Because of its predominantly urban environment, the Team did not survey the Jaffna DS Division. According to statistical information on Jaffna District, there are 212 registered FOs in the district, 112 of which exist in these four DS Divisions. Besides FOs, there are also ten growers' societies in the four DS Divisions Table 3-2. The Team completed 98 inventories (see Appendix 3-4).

**Table 3-2: CBOs in agriculture sector in the selected four DS Divisions and Jaffna District**

	<b>Kopay</b>	<b>Velanai</b>	<b>Point Pedro</b>	<b>Chavakachcheri</b>	<b>Jaffna District (whole)</b>
<b>Farmers Organization</b>	31	15	19	51	212 (reg)
<b>Societies</b>	1. Urumpirai Mango Producers and Sales Society. 2. Puththur Mango Producers and Sales Society	n/a	n/a	Kaithady Mango Producers and Sales Society	Mushroom Producers and Sales Society
<b>Cooperative Society (Registered)</b>	1. Vali-east Plantains Producers and Sales Cooperative Society Ltd. Reg no- J/1073. 2. Valigamam east Grapes Production and Sales Cooperative Society Ltd. Reg no-NJ.89 of 18.01.2010 3. Vali-east Livestock Breeders Cooperative Society Ltd. (LIBCO) Reg no- J/2062 of 08.09.1989	Theevakam Island south Livestock Breeders Cooperative Society Ltd. (LIBCO) Reg no- N.J.51	Vadamaradchy Livestock Breeders Cooperative Society Ltd. (LIBCO) Reg no- J/206	1. Chavakachcheri Fruit Producers and Sales Cooperative Society Ltd. Reg no- J. 87 2. Thenmaradchy Livestock Breeders Cooperative Society Ltd. (LIBCO) Reg no- J/2063	Seed Production Co-operative Society of Jaffna Peninsula (Ltd) -(SEEDCO) Reg no-N.J.35 of 29/06/2002

<sup>22</sup> The selected four DS Divisions accord with the selected five DS Divisions for the implementation of the pilot projects. For the selections criteria and more detailed information about the selected DS Divisions, please refer to Chapter 7.

FOs are registered to DAD, and DAD is responsible to guide FOs. Most of the FOs are associated with DAD, DOA and NGOs' activities. These FOs undertake activities, such as beneficiary selection for farm inputs' distribution, renovation and maintenance of tanks/bunds, stray cattle prevention during paddy season, and the maintenance of irrigation gates (barrages). In other words, as an organization that represents farmers, FOs' major activities consist of the maintenance and renovation of small, communal agricultural properties, as well as the mediation/coordination of supporting agencies and farmers. While some FOs function well, many others work only for NGOs or on pre-determined schedules set by the government agencies. Moreover, almost none of them are engaged in economic activities; these FOs should act on their own in developing their respective roles.

The second segment of CBOs in the agriculture sector consists of commodity-based cooperative societies which are registered to DCD. There are 10 farmers' cooperative societies (FSs), 11 livestock breeders' cooperatives (LIBCOs), 19 Palm Development Cooperative Societies (PSs), and a Seed Production Co-operative Society (SEEDCO).

FSs were established relatively recently under the guidance and support of DOA, and some of them are already quite active. LIBCOs were established more than 20 years ago under the guidance and support of DAPH. These organizations are directly involved in the production and marketing of dairy products, with some LIBCOs continuing to function well. PSs were established more than 30 years ago under the guidance and support of PDB, and most of them are declining their activities. SEEDCO was established in 2001 under the guidance of DOA, and its activities are expanding little by little with the support of DOA and donors. Strengthening these groups is essential in order to strengthen farmers' economic condition. Table 3- 3 reflects the CBOs' activities and issues as they pertain to the agricultural sector.

**Table 3- 3: Activities and issues of CBOs in the agriculture sector**

	<b>Activities</b>	<b>Issues/Remarks</b>
<b>FO</b>	<ul style="list-style-type: none"> <li>- Beneficiary selection for subsidised input</li> <li>- Renovation and maintenance of tanks/bund</li> <li>- Stray cattle prevention</li> <li>- Maintenance of irrigation gates</li> </ul>	<ul style="list-style-type: none"> <li>- No economic activities</li> <li>- Only working on work schedule determined by agriculture authorities (less ownership)</li> <li>- The main reason to become a member is to receive subsidies</li> <li>- No district-level federation</li> <li>- Weak financial foundation</li> </ul>
<b>FS</b>	<ul style="list-style-type: none"> <li>- Facilitate marketing</li> <li>- Supply input such as manure</li> </ul>	<ul style="list-style-type: none"> <li>- Newly set up societies such as mango growers', grape growers' and mushroom growers' society</li> <li>- Weak in administrative work and need more technical support from agriculture authorities.</li> <li>- Plantain (banana) society has a long history and functions well</li> </ul>
<b>LIBCO</b>	<ul style="list-style-type: none"> <li>- Milk collection and sale</li> <li>- Supply of input, such as veterinary medicine</li> <li>- Milk processing by a few LIBCOs</li> <li>- Facilitate NGOs project-related activities</li> </ul>	<ul style="list-style-type: none"> <li>- No land ownership; lack of infrastructure</li> <li>- Most of the LIBCOs are not very active (lack of good administration and poor management)</li> <li>- No processing or refrigeration storage facilities to extend its activity to value addition</li> </ul>
<b>PS</b>	<ul style="list-style-type: none"> <li>- Production and sales of coconut and palmyrah-based products</li> <li>- Profit is used to assist in education of the society members and for expenses of accident/funeral.</li> </ul>	<ul style="list-style-type: none"> <li>- No permanent buildings; functioning in private houses</li> <li>- Low production capacity, poor quality, no attractive packaging</li> <li>- Lack of capital</li> <li>- Need staff development</li> </ul>
<b>SEEDCO</b>	<ul style="list-style-type: none"> <li>- Purchase seed paddy and OFC seed from contract seed growers</li> <li>- Cleaning seed paddy and OFC seed</li> <li>- Supply quality seed paddy and OFC seed to farmers through ASC</li> </ul>	<ul style="list-style-type: none"> <li>- No office building</li> <li>- OFC seed production is limited</li> <li>- Inefficient processing (already improved by the pilot project mentioned in the later part of the report)</li> <li>- No laboratory for testing quality of seed</li> </ul>



### 3.2.4 Existing Plans

This section summarizes different plans proposed in the development of the agriculture sector for the Northern region. Followings are the development plans the Team has obtained;

- (1) “National Agriculture Policy for Food and Agricultural Export Crops and Floriculture” by Ministry of Agricultural Development and Agrarian Services in 2007
- (2) “A Ten Year Horizon Development Framework, 2006–2016, Discussion Paper” by Department of National Planning, Ministry of Finance and Planning in 2006
- (3) “Master Plan for Crop Sector Development- Northern Region” by PDOA, Northern Province in 2010
- (4) “Five Year Investment Programme (2009–2013) Northern Province” by Northern Provincial Council, 2009
- (5) “Outline for Livestock Development” by DAPH/Jaffna in 2010

(1) and (2) are national level policy papers, (3) and (4) are provincial plans and (5) is a district level outline of livestock sector development. Each of them provides convincing direction and actions to be taken for agricultural development. (3), (4) and (5) are the most important plans for agriculture in Jaffna District. Objectives of agriculture development of Northern Province indicated in these plans are summarized as follow; to convert from subsistence agriculture system practiced during the conflict era into commercially oriented agriculture systems by promoting the production of high value market-led products. However, those are not clear about source of funding and missing quantitative indicator of achievement.

- (1) National Agriculture Policy for Food and Agricultural Export Crops and Floriculture (Ministry of Agricultural Development and Agrarian Services, 2007)

In order to guide the future development of the agriculture sector, the National Agricultural Policy (NAP) was launched on 3 September 2007, which seeks to address major weaknesses of the sector such as the decreasing productivity and income differences between the agriculture sector and other economic sectors, particularly the manufacturing sector, supply-side constraints as well as the lack in taking advantages of market opportunities and insufficient capability to manage development challenges at both national and international levels.

The NAP facilitates not only to maintain income maximization through optimal utilization of resources as its overriding objective, but also achieve a balanced development between the agriculture sector and other sectors by enhancing sector integration with the rest of the economy.

The NAP outlined main strategies which include;

- Optimization of resource use
- Accelerating industrial development
- Enhancement of research development efforts and technological diffusion
- Encouraging greater role of the private sector in transforming agriculture into viable agribusinesses

and commercial undertakings

- Reformation of marketing to penetrate and explore new and traditional markets
- Establishing a dynamic food industry
- Developing viable and self-reliant farmers' associations and restructuring the agriculture sector.

(2) A Ten Year Horizon Development Framework, 2006–2016, Discussion Paper (Department of National Planning, the Ministry of Finance and Planning, 2006)

This Paper envisages that the agriculture sector will grow at faster rate of 4-5% with a higher contribution coming from the non-plantation sector, such as other food crops (non paddy), fruits and vegetables, fisheries and livestock. GOSL's strategy in agriculture is based on the need to be competitive in production and marketing by increasing productivity, lowering production costs and adding value to raw materials. Raising the rate of growth in agriculture can make an important contribution to rural poverty reduction.

(3) Master Plan for Crop Sector Development- Northern Region (PDOA, the Northern Province, 2010)

This is a comprehensive master plan for crop sector development in Northern Province. The plan is prepared by the Provincial Director of Agriculture, the Northern Provincial Council in January in 2009. The master plan contains the strategic aspect of sustainable crop production of paddy, other field crops and horticultural crops, agro-enterprise development, market development, institutional and organizational service improvements and sustainable resource managements.

Objective and Specific aims: The overriding objective of the policy is the maximization of income through a) optimal utilization of resources, b) achievement of a balanced development between the agriculture and manufacturing sectors, c) enhancement of the integration of the sector with the rest of the economy and d) food industry development. Major objective in crop agriculture is to convert from subsistence agriculture system into commercially oriented agriculture systems by promoting the production of high value market-led crops.

Strategies: The long term growth and development objectives for the creation of a modern and commercialized agriculture sector will be achieved through the implementation of the following strategies;

a) Demand-pulls Crop Cultivation

- Diversification of paddy land to other crops
- Better management of the water resources
- Export selected fruits and vegetables in fresh and processed form
- Emphasizing of the nucleus farm/out-grower system to involve larger number of small growers so as to render agro processing and marketing commercially viable
- Production of oil seeds

b) Optimization of Resource Use or Conservation Agriculture

- Overcome agriculture sector constraints such as increased limitation of water resources, input availability, shortages of labour, depletion of resources and pollution

- Need to sustain and enhance its competitiveness in domestic and world markets
  - Exploitation of growth possibilities arising from the effect of the forward and backward linkages
  - Land: Focus on rehabilitation and consolidation of abandoned agricultural land
  - Formulation of a comprehensive land use plan which incorporates inter and intra sector needs
  - Efficient usage of water resource management and use in agriculture
- c) Agro-Based Dynamic Food Industry Development
- Utilize large and expanding domestic market
  - R&D efforts, promotional and incentive policies
  - Formulate and implement a food policy emphasizing both quality and nutritional aspects
  - Establishment of industrial zones, provide credit lines to enable farmers to re-establish their operation and to promote private sector initiatives in establishing new industries
- d) Research Development and Extension (R & E)
- Resource management, production methods, processes and packaging, and plant varieties
- e) Role of the Private sector
- Encouraging and promoting both famers' and fishermen's organizations to participate in commercial and agribusinesses undertakings including joint ventures with local as well as foreign investors
- f) Market information
- Providing issues related to market access, competition, market shares, prices and trade practices
- g) Measure for resource conservation
- Rural resource conservation; land, water and environment, rebuilding agriculture organization, renovation of agriculture infrastructure, support for farming activities

(4) Five Year Investment Programme (2009–2013), Northern Province (Northern Provincial Council, 2009)

The Northern Province was demerged from the North East Province as per the Supreme Court determination in October 2006. Following the determination, Northern Province commenced its function separately in January 2007. Under these circumstances, a new Investment Programme for the Province was formulated for the period 2009–2013.

1) Agriculture (Crop production)

**Objective:** The objective is to revitalize agriculture for livelihood restoration and surplus production, leading to commercialized farming and agric–business development along with the promotion of income generation activities for the targeted groups such as vulnerable, farm women and affected youth and make aware of the new options available for development.

Major priority areas to be focused:

- Food and nutritional security
- Revitalize crop cultivation for restoring peasants' livelihood
- Sustainable production & productivity enhancement
- Market-led crop development
- Seed & Planting material production
- Ecological concern plant protection development
- Appropriate farm mechanization and Post harvest technology development
- Farmer & Farm women empowerment for social institutionalization & participatory action
- Institutional improvement for effective service delivery and ICT
- Development for information management and cyber extension

Interventions to address issues in relation to priorities and objectives:

- Development of social institution & clients capacity building
- Development of forward & backward linkage to sustain production & market net work
- Rehabilitation of rural infrastructures including area accessibility and post production
- Assistance for revitalization of crop production ventures and agro-based micro enterprise development
- Re-Demarcation of AI ranges to manageable coverage for effective delivery
- Strengthening of District Agricultural Training centers (DATC) & renovation of in-service training institutes
- Improvement of government farm facilities for quality seed and material production
- Rehabilitation of office buildings and quarters for effective service delivery

2) Livestock

Objectives/Priorities:

- Establish a healthy livestock population and take care of the ethic of the animals by enforcing all acts and regulation
- Increase the productivity of the livestock through improves the genetic quality of the indigenous stock
- Improve the knowledge of the livestock farmers through continuous education & training
- Improve the management of the livestock & poultry
- Improve the institutional capacity for better out put
- Planning, Implementation, monitoring, evaluation and reporting the achievement

3) Irrigation

Priority Objectives:

- Increase productivity of unit for water through improved cropping and irrigation techniques in existing as well as new schemes
- Diversity and link output of irrigation systems with stable and established markets to stabilize

income and productivity of irrigation systems

- Improve the management of existing major schemes, through successfully implementing participatory management systems in the schemes
- Improve the existing systems of operation and maintenance, through participatory approaches and establishment of viable funding mechanism
- Improve management of minor or small schemes, through awareness, education and a farmer funding mechanism to support operation and maintenance and increase productivity. Assist in farmer financing of pumps or wells to enhance productivity from minor schemes
- Encourage help to spread new technology for reducing water use and improve productivity of small and medium schemes through systems such as micro or drip irrigation or other systems
- Improve the watershed of small medium and large systems through participatory approaches
- Rehabilitate abandoned or poorly maintained but operational schemes, with farmer ownership including funding or labour inputs, with technical assistance from government irrigation agencies including a study of surface and groundwater availability for such rehabilitation
- Establish a system of trans-basin linkages between major rivers or river basins to divert water to water short schemes and for multiple uses of water and develop other new systems of feasible
- Establish river basin management authorities for all major river basins, to share water for various purposes and improve the distribution and productivity both surface and groundwater
- Improve the capacity of institutions to better manage irrigation systems including groundwater resources.

(5) Outline for Livestock Development by DAPH/Jaffna, 2010

Vision: Contribute to social welfare in Northern Province through livestock production

Mission: Promote modernized, commercialized animal husbandry methods to reach self sufficiency in livestock production

Key objectives:

- Establish a healthy livestock population
- Increase the productivity of livestock through improvement in the genetic quality of indigenous stock
- Improve knowledge of livestock farmers through continuous education
- Improve the management system of livestock
- Improve the institutional capacity building for better output
- Planning, co-ordination, monitoring, evaluation and publishing the achievement

Key areas for development and projects:

- Value addition  
Establishment of center for milk processing
- Dairy development  
Heifer calf rearing scheme, construction of cattle shed, construction of bio gas plant, supply of milk utensils for milk collection, development of pasture and fodder cultivation, construction of small

laboratory with needed instruments for testing milk at Veterinary office, registration of dairy farms, control of cattle parasites, establishment of dairy village, dairy synchronization and breeding programme, establishment of new dairy units

- Poultry development

Reconstruction of new poultry houses, supply of cages for back yard poultry

- Goat development

Establishment of goat breeding farm, supply of stud goats for local herds, reconstruction of goat shed

- Economic infrastructure

Construction of new building for Valikamam south LIBCO, construction of training hall with fully equipped

- Self employment

Promote hybrid goat farming, promote village poultry farming, establishment of mineral mixture block at small scale feed mill, issue of cattle, issue of goats, issue of backyard poultry chicks and cages

- Marketing facilities

Construction of livestock market, construction of small scale processing plant for broiler poultry meat, construction of livestock market, milk sale outlet, modernizing slaughter house facilities

- Extension work

Conduct the farmers training classes, conduct the mobile clinic work, vehicle for inspect project and mobile clinic work pick up

- Vocational skill development

Training on animal husbandry for farmers, training on dairy management, training on goat management, training on poultry management

(6) Relationship with the Road Maps for Agriculture Development

Despite some weakness in these plans, they certainly indicate development direction and actions to be taken. The Road Maps for Agriculture Development presented in Chapter 9 are consistent with the objectives and priority areas defined in these plans; they have common recognition of the present key issues of input supply, resource management, production technology, marketing, infrastructure and institutional capacity development,

### **3.3 Key Issues and Challenges**

To capture key issues and challenges pertaining to agriculture in Jaffna, the Team conducted personal interviews with farmers and agricultural officers, collected data, visited important sites and conducted focus group discussions (FGDs). FGDs were conducted in six places in the above-mentioned four DS Divisions which more or less geographically represent the major agricultural regions in Jaffna District (See Appendix 3-1). The FGDs built a foundation for understanding the issues and challenges and gave more valuable details about future plans for the Jaffna agriculture (See Appendix 3-2). A summary of survey findings is presented below, in brief, with different key issues identified.

### 3.3.1 Emergency Assistance to IDPs and Returnees

As of May 2011, the families that were displaced and are now living with host families/welfare camps in these four DS Divisions of Chavakachcheri, Point Pedro, Velanai and Kopay DS divisions are 2,876, 2,217, 1,197 and 2,168, respectively.<sup>23</sup> Subsistence food cultivation is an emergency need for IDPs and returnees. At the same time, cash income sources should be provided. Thousands of hectares of land have been abandoned due to the displacement of people. The restoration of these areas is a high-priority need for livelihood improvement.

### 3.3.2 Water Resources

The agriculture depends on the rainfall and on the limited ground water resources to meet its needs. The availability of water resources is a limiting factor for the agriculture in Jaffna Peninsula. It is imperative that future work in the region should focus on combining groundwater management and sustainable agricultural practice. This section summarizes issues related to water resources.

#### 1) Available water resources

Jaffna Peninsula has the annual rainfall of approximately 1,200mm, which is usually during the October-to-December monsoon season. Dry-season agriculture depends totally on the groundwater reserved in the shallow karstic aquifer during the rainy season. There are several reports on the capacity of groundwater in Jaffna Peninsula; however, all of them are no more than estimations—the exact capacity is unknown. The Jaffna Plan in 2003 calculated the water balance of Jaffna Peninsula, as shown Table 3- 4 below.

**Table 3- 4: Water Balance of Jaffna Peninsula<sup>24</sup>**

Catchment area	1,000km <sup>2</sup>
Average rainfall	1,200mm
Effective area—infiltation	80%
Yield from catchment (1,000km <sup>2</sup> × 0.8, 1,200mm )	960,000,000 m <sup>3</sup> /year
Evapo-transpiration	616,000,000 m <sup>3</sup> /year
Groundwater recharge—potential	344,000,000 m <sup>3</sup> /year
Limited storage in groundwater reservoirs (300km <sup>2</sup> )—estimated	188,000,000 m <sup>3</sup> /year

Water for domestic and agricultural purposes is normally extracted from the open dug wells. The water availability in these wells, as well as the water quality, varies from place to place. The Valikamam region, which covers 50% of the peninsula over Kopay, Thellipalai, Uduvil, Sandilipai, and Chanakanai DS

<sup>23</sup> District Secretariat Jaffna (2011), *Population of Jaffna District as at 31.05.2011*

<sup>24</sup> Jaffna Plan (2003)

Divisions, is underlain by a Miocene limestone formation. This is considered to be a sustainable aquifer with excellent physical properties for groundwater storage and discharge. Thus, in the majority of the deep wells in the Valikamam region, water is available throughout the year. These wells are situated in the calcic red-yellow latasols, and their depth normally varies from 20 to 25 feet. The wells available in other areas are usually shallow (10 to 15 feet), but very deep wells can also be found in the Chavakachcheri DS Division. This is the most extensively used groundwater resource in the country. Approximately 80% of the groundwater is being used for high-value agriculture, and the remaining 20% is for domestic purposes, including toilet-flushing demands in the urban areas of Jaffna.<sup>25</sup>

## 2) Water Shortage

In earlier times, farmers did not use water pumps; they fetched water from ditches or wells and watered crops, yet they were able to cultivate year-round without facing water shortages. Now, they pump more groundwater than needed for crops. Hence, obtaining water during later stage of dry periods is a hard task particularly on islands and certain areas of the district. Existing water sources also become saline during drought periods. The agro-wells adjacent to the lagoon face severe water deficiency and salinity during the period. Therefore, farmers have no choice but to limit their cultivation based on water availability.

As it is mentioned in “3.1.1 Introduction,” tanks, wells and ditches were generally maintained poorly and damaged during the conflict era, which is another reason of water shortage. Thanks to reconstruction efforts after the emergence of peace, a numbers of tanks were restored. However, it is apparent that some more restoration work is needed.

## 3) Salinity and Water Pollution

Farmers struggle with salinity in almost all regions of the district. Altogether 16,000ha of land were abandoned in the district due to saline/alkaline problems. Some are now considered barren land.<sup>26</sup>

The SWE bunds play a major role in preventing the intrusion of sea water into paddy land or into high land in many places of the district. Among the four DS Divisions, Velanai has damaged or poorly maintained SWE bunds. In addition, the illegal mining of stones and sand is responsible for sea water intrusion near coastal regions. This should be halted. (Please refer to Appendix 3-1 & 3-2 for more information.)

Studies conducted by the Faculty of Agriculture, University of Jaffna, found that approximately 65% of farm wells were polluted with excess nitrate/nitrogen (above the WHO recommended level of 10mg/l) in areas where intensive agriculture is practiced. Since the use of fertilizers and water exploitation is high, groundwater which is limited in quantity becomes polluted and saline. However, farmers are not ready to reduce their use of inorganic agro-chemicals and to increase the use of organic manure.

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<sup>25</sup> Panabokke C. R. & Perera A.P.G.R.L. (2007). *Ground water resources of Sri Lanka*, Colombo, Water resources board

<sup>26</sup> District Planning Secretariat of District Secretariat (2008), *Jaffna District Integrated Agricultural Development & Extension Programme 2008-2009 Maha & 2009 Yala, Jaffna district*



Most agro-wells were damaged and need to be restored in all the four DS Divisions. According to the data from DAD, about 300 agro-wells remain in poor condition. Therefore, flood water easily enters into these agro-wells, making water polluted.

The quality assessment of soils and irrigation water is crucial in making recommendations on crop cultivation. The Agriculture Research Station (ARS), Jaffna, has useful equipment for quality testing of soils and water. However, the equipment has yet to be fully utilized.

### **3.3.3 Production**

The fundamental steps required to enhance agricultural production include good management of land preparation, input supply, irrigation, pest management, harvesting and storage. Most serious issues were identified in labourer availability, quality of planting materials, pest incidence and irrigation.

#### **(1) Input Supply**

##### **1) Labourer Availability and Agro-machinery**

Labourer availability is a challenge for many farmers during land preparation and harvesting, particularly during the season of paddy cultivation. In earlier times, a labourer's wage was LKR 200 per day, however it is now increased to LKR 800 (June 2010). Moreover, labourers can earn as much as LKR 1,000 per day for construction work. Increased use of agro-machinery is one possible solution to the labour shortage. However, agro-machinery services are inadequate in the four DS Divisions. Therefore, farmers have to pay higher prices for their agricultural operations. Sometimes, because of the poor availability of labour and machinery services, farmers lose their produces because of heavy shedding in fully matured grains. (Please refer to Appendix 3-2 for more information.)

##### **2) Seed and Planting Resources**

Farmers are able to get some high-quality seeds from SEEDCO via ASC or via private dealers like CIC and Best Seed. SEEDCO supplies 1,860 kg of vegetable seeds and 90,000 kg of paddy seeds annually. Currently, however, SEEDCO is only able to supply less than 20% of the total seed requirement of the district. The shortfall is being met by personal seed production of farmers and private seed suppliers; the quality of their seeds is generally substandard.

Getting tree crop seedlings in time is another difficult task for Jaffna farmers. Most farmers depend on external sources for seedlings. Usually, only a few nurseries supply seedlings of wide varieties but later farmers, unfortunately, realize some varietal changes. The quality of planting materials is neither guaranteed nor certified.

The coconut seedling is an important example. The CCB reopened damaged coconut nurseries in 2010, but the number of seedlings produced there cannot meet the local demand at all (Please refer to Appendix 3-2 for more information).

### 3) Stock Supply

Lack of genetically improved cattle and goat breeds is a major challenge in the livestock sector. There are no cattle breeding farms or other private farms in the district that supply quality breeds. As transportation between Jaffna and the south has been restored, the possibility of importing milking cows, heifers or goats from the south should be considered to expand the parent stock.

The poultry sub-sector also needs to be upgraded. The low-quality traditional/country fowls should be replaced by improved commercial breeds. A hatchery in Atchchuvely established by UNDP is currently producing 2,500 chicks per month. Still, this number is not enough to meet the requirements of Jaffna.

An additional problem stems from the insufficient parent-stock supply by the Karanthagoda farm, a functioning farm in the southern part of the country. This farm is the only parent-stock supplier in the country and supplies to all of the country's hatcheries. A better option may be to import superior quality, improved breeds from India and distribute to farmers (Please refer to Appendix 3-3 for more information).

### 4) Agro-chemicals

Reopening of the A9 road has removed some difficulties of Jaffna farmers in getting continuous agricultural input. Many agro-chemical dealers such as CIC Agro chemicals, Hayleys Agros, Bours, Bio powers have already established their market outposts in Jaffna. (Please refer to Appendix 3-2 for more information.)

### 5) Availability of Agricultural Loans

Notably, People's Bank, Bank of Ceylon (BOC) and Hatton National Bank (HNB) are currently supporting district farmers through the provision of several kinds of loans. There are around 16 BOC branches, 22 Peoples Bank branches and five HNB branches. The New Comprehensive Rural Credit Scheme (NCRCS), the Agro Livestock Development Loan scheme (ALDL), the Coconut Development Loan and the Poverty Alleviation Microfinance Project (PAMP) are among the agricultural loans being granted (Please refer to Appendix 3-2 for more information).

## (2) Improvement of Technology

### 1) Acquiring New Technologies

Extension services in Jaffna are inadequate compared with other districts of Sri Lanka. There are only 12 AIs for the entire Jaffna to provide their extension services to more than 62,000 farming families.<sup>27</sup> Usually, most farmers seek advice from agro-chemical dealers and other farmers to solve their problems rather than consulting AIs.

### 2) Obtaining manure and compost

Manure and compost application is essential to maintain soil fertility, reduce contamination of groundwater caused by inorganic fertilizer and harvest good quality produce. Yet, farmers face serious

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<sup>27</sup> District Secretariat (2009). *Jaffna district statistical Information*, Jaffna district

problems in obtaining manure; it is only available at quite high prices (cost of cow dung, LKR 30,000 per lorry load). The use of compost has declined over time.

3) Grappling with Mammalian Pests

Monkeys and wild boars are two factors threatening the livelihood of farmers in certain areas of most DS Divisions, particularly in Chavakachcheri DS Division (Figure 3- 15 & Figure 3- 16). Farmers are not able to control these animals because of gun control of the military. Wild boars used to come from the nearby HSZ areas and jungles at night and destroy paddy fields, yam cultivation and other crops. The maps on the next page indicate the extent of damages made by monkeys and wild boars. (Please refer to Appendix 3-1 & 3-2 for more information)



Figure 3- 15: Reported Area of Monkey Damage<sup>28</sup>



Figure 3- 16: Reported Area of Wild Boar Damage<sup>15</sup>

<sup>28</sup> Figure 10-11. Note: Gradation shows degree of damage. Source: Made by authors based on interview to AIs



**Figure 3- 17: Reported Area of Stray Cattle Damage<sup>29</sup>**

Damage caused by stray cattle is also a common problem in the district. DAD estimates that more than 20,000 stray cattle can be counted. Particularly in Chavakachcheri DS Division, there are around 400ha of paddy land being threatened by stray cattle (Figure 3- 17). According to DAD, 75km of fencing is necessary to keep these stray animals away.

#### 4) Pests and Diseases

Most farmers rely on agro-chemicals to control pests. They have seen success in controlling pests with repeated applications of these chemicals. Some pests cannot be controlled by a single type of chemical in one dose, as they adapt and develop different biotypes. Therefore, farmers seek new varieties of chemicals each and every time and spray crops repeatedly. Farmers sometimes fail to practise the pre-harvest interval (PHI) as instructed by chemical companies, which is, of course, very harmful to consumers.

Several authorities have alarmed people by claiming that vegetables harvested in Jaffna may carry chemical residues. However, precise data has not been collected by authorities as there is no pesticide residual analysis unit in Jaffna. The Team commissioned the Chemical & Microbiological Laboratory, the Industrial Technology Institute, to perform pesticide residue analysis. The following pesticides were identified during the analysis of vegetables and fruit collected from three different markets in Jaffna (Thirunelvely, Maruthanaarmadam and Kodihaamam): Chlorpyrifos and/or Profenophos were identified on green chilli purchased in Maruthanaarmadam and Kodihaamam markets. Chlorpyrifos was identified on a brinjal sample purchased from Kodihaamam market. Grapes purchased from all the three markets contained the pesticide residue Diazinon and Chlorpyrifos.

<sup>29</sup> Figure 10-11. Note: Gradation shows degree of damage. Source: Made by authors based on interview to AIs

#### 5) Environmental Concerns of Livestock Rearing

Regarding cattle, if there are two to three animals in a house, little environmental problem is expected. However, if 10–15 animals are to be reared in a limited space, there can be a problem, especially during the rainy season. These problems include contamination of groundwater, bad smells and the creation of unhygienic conditions. In the case of poultry, if there are less than 20 birds per household, then there will not be any environmental problems.

### **3.3.4 Marketing and Agro-Processing**

#### (1) Market linkages

Market linkages are the key to the revival of local agriculture. The reopening of the A9 road has drastically improved market linkages, which is essential not only for Jaffna farmers to sell in other markets but also for Jaffna consumers to have access to cheaper goods from the south. After the A9 opened, some vegetable products were brought from the Dambulla Economic Zone and thereby, local products fetch lower prices. However, some of Jaffna's traditional fruits and vegetables such as mango, string bean, moringa and cassava have fetched higher prices. Previously, all the agriculture inputs were brought in by marine service, a procedure which considerably raised the cost of production.

#### (2) Promotion of popular traditional crops

Red onions, mangos, bananas, and grapes are major cash crops cultivated in Jaffna Peninsula, and traditionally popular in Sri Lanka. Taking this advantage, ensuring the development of these traditional Jaffna specialties is the one of the worthy developmental strategies in Jaffna. With the opening of A-9 road, more red onion and banana have been shipped to the south. Although mango has now the solid market, most of the mango trees are old, over grown and become unproductive due to poor maintenance during the conflict. Mango growers are not well aware of proper maintenance techniques and unprepared to invest additional sum of money in maintaining their trees. Grape also find good market in south, however, many grape farmers have lost their economic strength and most of them are not in a position to restore their status back as was in the year of early 1990's.

#### (3) Introduction of new crops

As far as the agriculture is in the market economy, it is necessary to seek continuously new crops which are profitable and suitable to the Jaffna's climate and soil.

Mushroom cultivation is one of those. At present, about 100 families in the district have recently started mushroom cultivation with the support of various projects. The production of mushroom is insufficient to fulfill the requirements of the district population. The level of mushroom production differs from farmer to farmer based on their technical and managerial skills. Also farmers are facing difficulty to obtain quality mushroom spawn.

Date palm and cashew nut are potential new crops for sandy soil area. Cashew nut has been introduced long time ago, but it was not expanded due to several reasons; one of those was the conflict. It should be tried again since the situation has now changed.

#### (4) Marketplaces

Small-holder farmers in Jaffna are now marketing their produce in the local markets in Thirunelvely, Kодиhaamam, Maruthanaarmadam, etc. However, these markets are old and are not properly designed for active and efficient transaction.

#### (5) Bargaining Power of Farmers

It is necessary for Jaffna farmers to increase their bargaining power in marketing. Farmers are comparatively in a weak position with middlemen dealing their products as farmers are not organized in that aspect.

#### (6) Lack of Storage Facilities

Because of the lack of cold storage facilities, farmers cannot store their produce overnight and must sell it at lower prices. If they had enough cold storage facilities, they would store their products and sell them once the demand rises.

#### (7) Processing of Vegetables and Fruit

No large-scale processing center for vegetables and fruits exists anywhere in Jaffna District. Exceptionally, the Jaffna Chunnakam Fruit Industries (JACHUFI) is producing fruit juices, snacks, jams and cordials from locally collected fruits like mango, papaya, citrus, tomato, etc. The construction of a fruit processing center called 'Palamuthirsolai' in Chavakachcheri DS Division is underway. In future, this center will process surplus fruits and help fruit-growers to earn more income through value addition. Further, the distilleries functioning in Thikkam (Vadamaraadchchi) and Navalay are involved in the production of bottled arrack and sweet toddy from palmyrah toddy. PSs are involved in the production of several palmyrah fruit and palmyrah tuber-based products such as jaggery - palm sugar, pulukkodiyal - boiled & dried tuber and odiyal - raw dried tuber.

#### (8) Marketing of Milk

Marketing of milk is problematic in all areas of the district. Some places have an excess of milk (Chavakachcheri, Point Pedro, Sandilipai DS divisions) and some other areas unsatisfied demand. There is no proper distribution channel to uniformly distribute the collected milk over the district.

#### (9) Processing of Animal Products

There is no large animal-products processing industry in Jaffna. However, a few LIBCOs are producing some sort of processed milk products such as milk juice packets, yoghurt, lollies, and paneer. Compared to the other 11 LIBCOs, the Point Pedro LIBCO is functioning particularly well in terms of milk processing. Currently, they do not have proper production and storage facilities, limiting their production. Also, there

is a seasonal marketing for processed milk products as well because Hindus have high demands for processed milk products during festive and fasting times (Please refer to Appendix 3-3 for more information).

### 3.3.5 Strengthening CBOs in the Agriculture Sector

#### (1) Farmers' Organizations

The first recommendation should be made in strengthening the FOs is the revival of dormant FOs. During inventory survey, the team compiled a list of 88 out of 112 FOs registered in the four surveyed DS Divisions. Approximately 20% of the 122 FOs were unavailable to take the survey; therefore, it was assumed that they were not functioning.

The second recommendation is to “activate” stagnant and passive FOs. Table 3-5 shows the number of FOs who responded to our question whether they had discussions on agricultural matters among member farmers. Approximately 64% of the participants answered they had discussions. The remainder did not respond. These results imply that roughly 36% of the FOs may not be interested in addressing agricultural issues.

**Table 3- 5: Number of FOs who answered, in the Focus Group Discussion’s questionnaire, that they have discussions on agricultural matters among member farmers**

AI Range DS	Velanai and Punkudutheevu, Valanai	Urumpiraai, Kopay	Puththur, Kopay	Chavakachcheri, Chavakachcheri	Kaithady, Chavakachcheri	Puloly, Point Pedro
No. of Participants who answered “yes”	5/10	12/17	10/16	17/22	7/13	8/14
Size of meeting	Variable	30-50 farmers	25-50 farmers	10-60 farmers	50-100 farmers	20-40 farmers
How often?	2-3 times/month	Once/twice in a month	2-3 times/month	2-3 times/month	Several times a year	Once/twice in a month

To implement above two recommendations, the capacity of Agrarian Service Center (ASC) including ADO may have to be strengthened since they are responsible to guide FOs. Nevertheless, FOs are government-organized CBOs, whose activities are stipulated by the 1979 Agrarian Act. Therefore, in many cases, FOs tend to be passive in their activities, and there is a certain limitation to develop FOs as they are now. It is necessary to have national level determination to restructure FOs.

#### (2) Agricultural Cooperative Societies

Unlike FOs, Farmers Cooperative Societies (FSs), Livestock Breeders Cooperative Societies (LIBCOs) and Palm Development Cooperative Societies (PSs) perform economic activities. They have the potential to grow to financially sound, independent organizations that will be able to improve member farmers’ economic state. However, most of these groups are still weak and rely on government assistance. The

main issues relating to these groups' capability include a lack of leadership, weak administration, poor management, and the lack of capital.

Leadership is an essential part of the vitalization of the above cooperative societies. The LIBCO Point Pedro is a good example, since it was able to successfully develop its sales outlets and save money to purchase its own land. The Team supported this LIBCO by providing a milk processing facility as a pilot project. While conducting the pilot project, the Team observed that the LIBCO attained success because of the effective leadership of a veterinary officer stationed at Point Pedro. However, these cooperative societies haven't had enough chance to be trained about leadership or organizational strengthening. Training on institutional development and organizational strengthening including leadership training should be provided more often.

SEEDCO is a special case among the cooperative societies. It is strongly supported by DOA and looks like an affiliated organization of DOA. Considering the importance of supplying quality seeds in Jaffna, the way of SEEDCO and DOA going along side by side is agreeable, and SEEDCO should be further developed as a seed supply center equipped with a seed testing laboratory and cold storages.





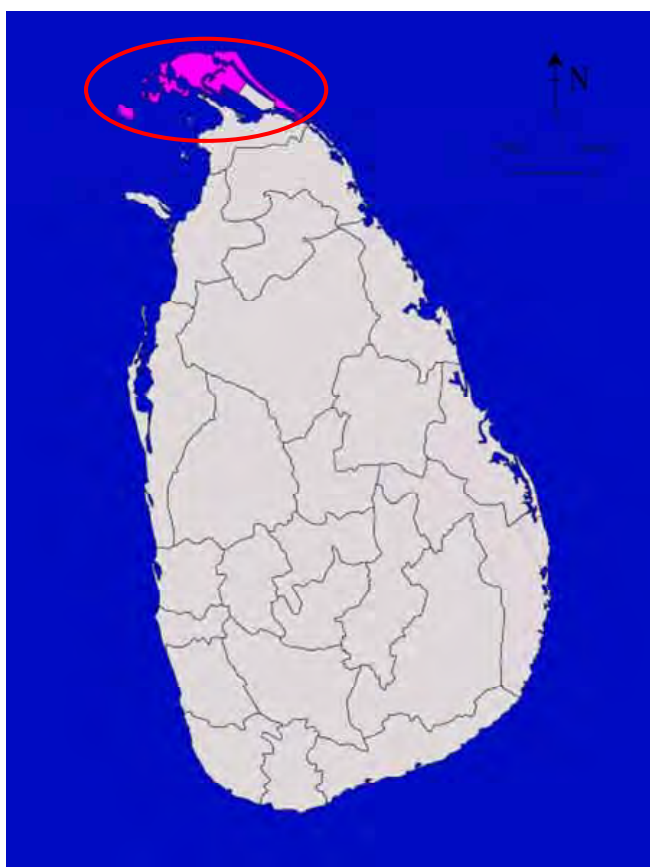
**Chapter 4**  
**Fisheries**

## Chapter 4 Fisheries

### 4.1 Overview

The fisheries sector has been an important component of the livelihood system of communities in Jaffna District. The fishing population of 89,232 lives in scattered coastal communities in the district, with 20,715 fishing households in 2009.<sup>1</sup> It was severely affected by the conflict that prevailed in the region in the last three decades and in need of rehabilitation and development.

#### 4.1.1 Geographical Feature



**Figure 4- 1: Location of Jaffna Peninsula**

Sri Lanka experiences two monsoon periods, southwest monsoon during the period from May to September and northeast monsoon during the period from November to February. Fishing activities in the western and southern areas of the country are disrupted during the more severe southwest monsoon. Small scale migration of fishing communities to eastern and northern areas also takes place during this period. Jaffna District, which occupies most of Jaffna Peninsula (Figure 4-1), is relatively sheltered from the southwest monsoon and the near-shore wave climate in the area is mainly influenced by the less severe northeast monsoon.

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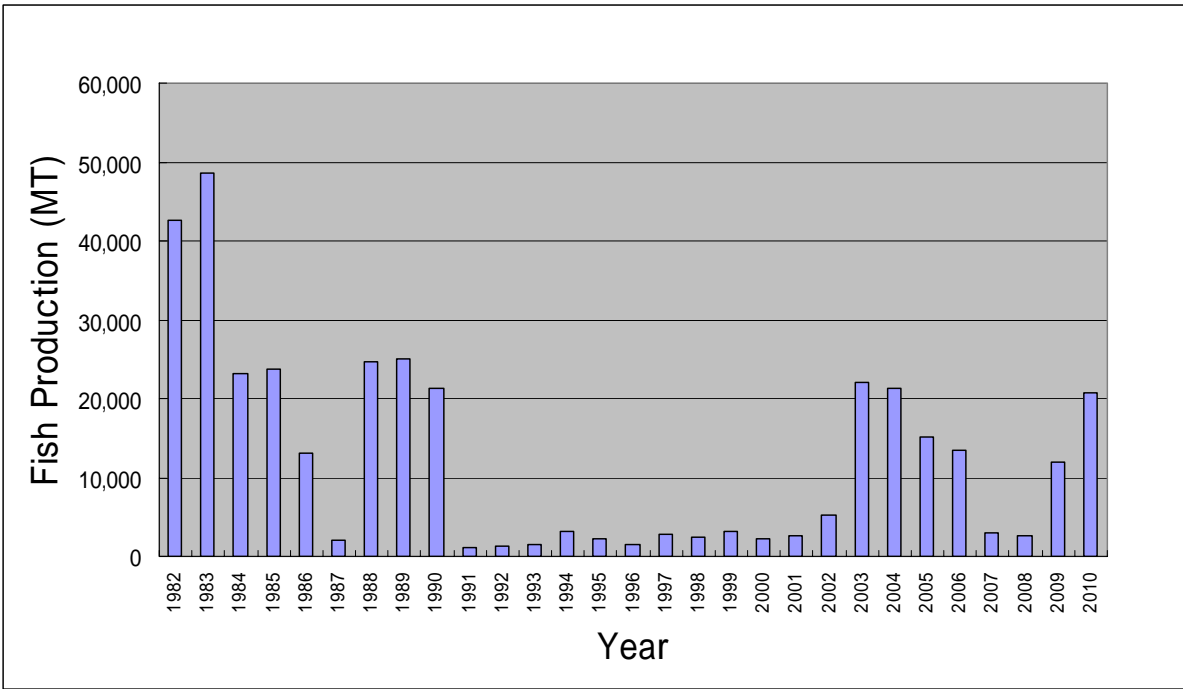
<sup>1</sup> District Secretariat. (2010). Jaffna district statistical Hand Book 2010, Jaffna, Sri Lanka, Statistics Branch, Kachcheri, Jaffna, (p.80).

Apart from the coastline along the northern and eastern sides of Jaffna Peninsula and the northern coastline of Karainagar Island, other coastal areas on the western side of the peninsula are relatively sheltered from the northeast monsoon due to the shallow depths and protection provided by land masses. In view of such sheltered nature of the coastal environment in the western side of the peninsula, it is relatively possible to carry out fisheries activities throughout the year with little disruption.

The coastal area along the northern side of the peninsula is characterized by rocky/sandy beaches and a limestone reefs located close and parallel to the coastline. The reef provides protection against coastal erosion due to wave action and naturally sheltered basins for the mooring of fishing vessels. Many such basins exist along the coastline.

**4.1.2 Impact of the Conflict**

Fishery production in Northern Province had accounted for 35-41% of the total fishery production in the country from 1979 to 1983, while it accounted for only 2-4% from 1994 to 2001 owing to the internal conflict.<sup>2</sup> Fishery production in Jaffna District accounted for more than 60% of the production in Northern Province (e.g., 49,000 tons in 1983, which accounted for 67% of the province) until witnessing a decline in the 1990s. Production again began to increase after the 2002 peace agreement (Figure 4-2).



**Figure 4- 2: Annual Fishery Production in Jaffna District (1982–2010)<sup>3</sup>**

<sup>2</sup> Pacific Asia Resources Center (PARC), (2005). Final report of pilot studies for knowledge assistance for proposals for sustainable fisheries development and improved market access by fisheries cooperative societies in the North and East, Sri Lanka. Colombo, Sri Lanka, JBIC, (p.19).  
<sup>3</sup> DFAR in Jaffna

Fishery production in Jaffna District steadily recovered after the 2004 Indian Ocean Tsunami (IOT),<sup>4</sup> and the catch in 2005 reached 15,158 tons. This figure dropped slightly to 13,432 tons in 2006, due to an escalation in the internal conflict. It decreased even further to 2,963 tons in 2007 and 2,671 tons in 2008. This marked drop in production lasted for 34 months, from August 2006 to May 2009 (Figure 4-3).

Since June 2009, production has witnessed a rapid recovery again, reaching 12,000 tons in 2009 and further 20,739 tons in 2010. This can be attributed to the fact that fishing operations became normalized after restrictions such as bans on night fishing were cancelled upon the termination of the conflict. Motivation for local fishermen has also intensified thanks to an increase in fish prices and the reduced prices of fishing supplies such as nets, outboard engines, and boats as the result of improved accessibility to Colombo through the reopened A9 road. A partial cancellation of the pass system<sup>5</sup> and the continued release of HSZ in land and the sea also contributed to the boost in production.

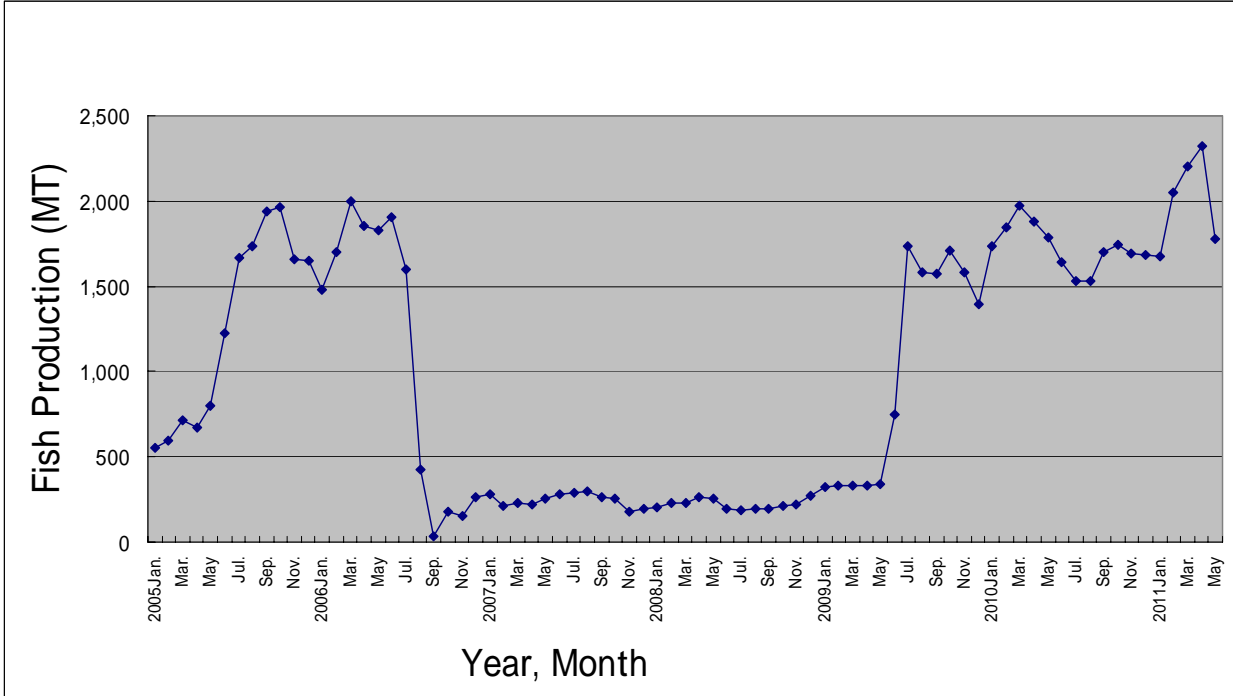


Figure 4- 3: Monthly Fishery Production in Jaffna District<sup>6</sup>

4.1.3 Increase of Fishing Boat

Fishing boats along coastal areas in Jaffna District sustained extensive damage during the 2004 tsunami. These boats, obviously the main requirement for fishing, increased rapidly thereafter thanks to the efforts of fishermen, the government, and NGOs in Jaffna District. The increase, however, concentrated on traditional craft and 17.5- to 23-foot fiberglass reinforced plastic (FRP) mechanized boats, with main type being 18-foot FRP boats (Figure 4-4). This was due to the fact that the fishermen of Jaffna

<sup>4</sup> It occurred on 26 December 2004.  
<sup>5</sup> Under the pass system, fishermen are required to obtain permission for every operation. According to the *Thinamurasu* (Tamil daily newspaper) dated 7 July 2011, the “pass system for fishermen has been totally lifted in Jaffna District.”  
<sup>6</sup> DFAR in Jaffna

were unable to build up the sufficient capital to invest in multi-day boats. This situation has begun to change recently. Multi-day boats have appeared in the Fisheries Monthly Progress Report prepared by DFAR in Jaffna since October 2010 with three of multi-day boats operating. The number had increased to 23 boats as of July 2011. Most owners of these boats who are Jaffna fishermen purchased reconditioned multi-day boats in the southern part of the country.

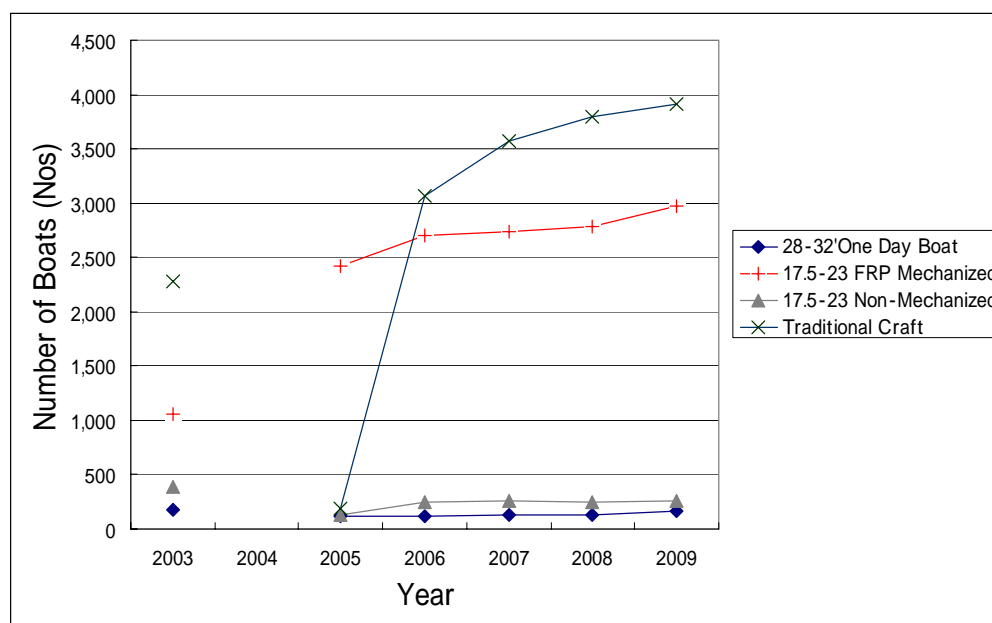


Figure 4- 4: Increase in the Number of Fishing Boats in Jaffna District<sup>7</sup>

#### 4.1.4 Seasonal Fish Catch

Table 4- 1 shows the monthly fishery production by Fisheries Inspector (FI) Division in Jaffna District in 2010. The district produced 20,739 tons of fish in the year. Among 14 FI Divisions in the district, the 8 FI Divisions of Jaffna West, Point Pedro East, Point Pedro West, Chulipuram, Kayts, Velanai, KKS East, and Sandilipay produced more than 1,000 tons, the total of which accounted for 81% of the annual fishery production in Jaffna in 2010.

Table 4- 1: Monthly Fishery Production by FI Division in Jaffna District (2010)<sup>8</sup>

Year	2010												Total of 2010
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	
Aliyawalai	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0	16.3	19.8	54.1
Thalaiady	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86.3	75.7	89.6	251.5
Point Pedro East	266.0	377.2	371.3	371.5	367.3	343.4	329.4	312.6	273.8	249.0	143.1	120.5	3,524.9
Point Pedro West	266.0	242.8	285.3	249.5	235.5	226.0	242.0	253.2	211.1	195.6	129.6	161.7	2,698.2
KKS East	105.6	112.8	122.3	128.2	118.4	106.5	102.3	85.4	84.4	82.6	99.5	82.3	1,230.2
KKS West	77.4	80.1	88.5	92.4	88.3	78.2	75.5	65.4	57.3	46.6	58.2	51.3	859.1
Sandilipay	97.8	87.4	91.0	87.0	84.0	79.0	77.5	80.2	95.4	108.8	117.2	114.9	1,120.1
Chulipuram	128.9	128.9	109.3	101.5	112.0	109.9	98.0	103.5	139.2	142.0	135.0	132.0	1,440.2
Kayts	85.8	95.8	167.2	155.2	102.7	146.5	78.6	104.1	108.8	112.2	107.6	110.0	1,374.5
Delft	79.0	86.2	82.1	80.6	99.3	86.2	54.6	38.9	48.5	66.5	67.0	98.0	886.9
Velanai	86.1	91.8	91.0	69.0	65.2	108.0	106.7	97.9	145.0	140.3	156.2	160.6	1,317.6
Jaffna West	395.5	402.7	424.5	409.1	367.9	202.5	208.3	222.4	361.9	329.4	428.2	391.2	4,143.5
Jaffna East	79.8	73.1	79.9	78.3	76.8	78.4	75.3	72.5	84.6	86.1	89.5	89.7	963.8
Chavakachcheri	67.8	64.4	63.4	59.3	70.8	77.3	80.6	91.3	88.6	81.1	68.0	61.9	874.4
Total	1,735.7	1,843.0	1,975.6	1,881.4	1,788.2	1,641.8	1,528.7	1,527.4	1,698.5	1,744.4	1,691.1	1,683.4	20,739.1

<sup>7</sup> Jaffna District Statistical Information 2010

<sup>8</sup> DFAR in Jaffna

Figure 4-5 shows the composition of fish catch by FI Division.<sup>9</sup> It is obvious that Point Pedro and Jaffna are the two major fish landing areas, as the total of their fish production accounts for 56% of that of Jaffna District. However, those two major fish landing sites indicate the different trend of seasonal fishery production as shown in Figure 4-6. This is because a northeast monsoon affects the active fishing operations in Point Pedro, facing the northern coast; likewise, a southwest monsoon affects fishing activities in Jaffna Division, facing the southern coast. Their small-scale fishing means also limit their operation during rough weather.

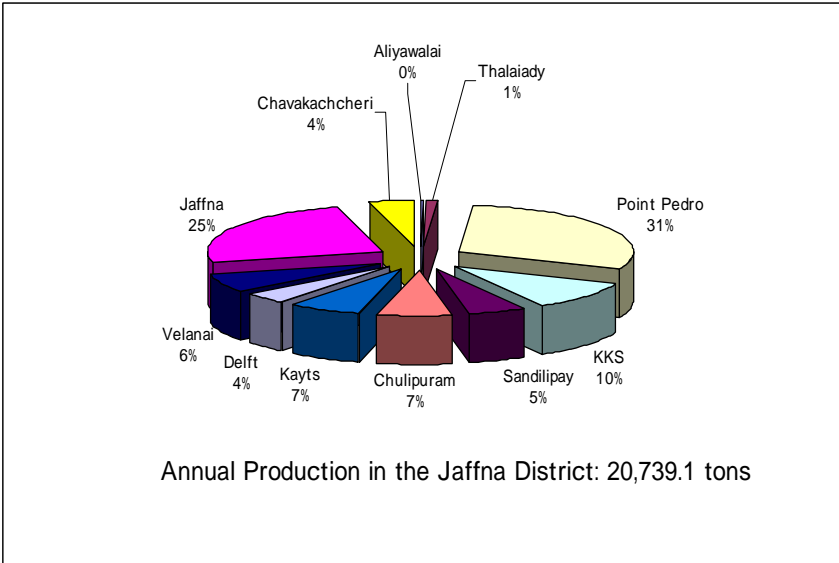


Figure 4- 5: Fishery Production by FI Division in 2010<sup>10</sup>

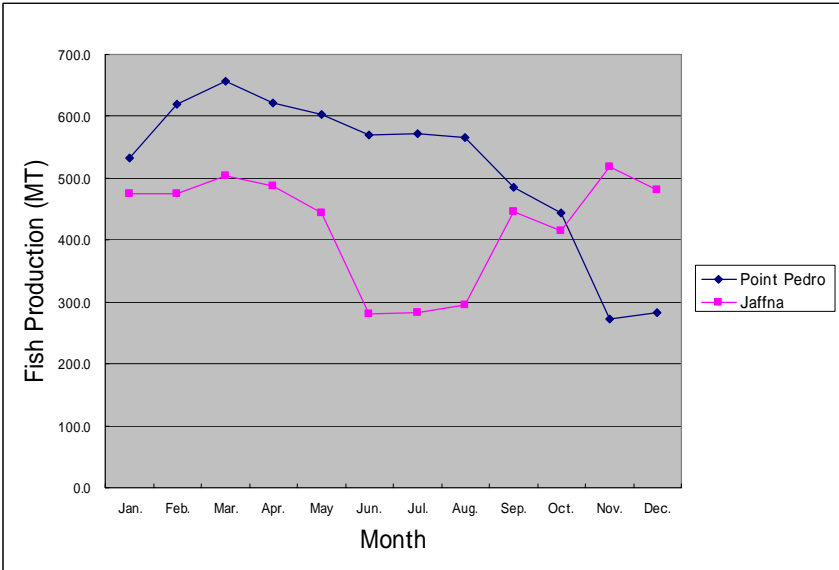


Figure 4- 6: Seasonal Change of Fishery Production in 2010<sup>11</sup>

<sup>9</sup> In this figure, the two FI Divisions of Point Pedro East and Point Pedro West are united as Point Pedro; likewise, Jaffna West and Jaffna East as Jaffna; and KKS East and KKS West as KKS.

<sup>10</sup> Source: Prepared using data in Table 4-1

#### 4.1.5 Composition of Fish Species

Figure 4-7 shows the fish species composition in Jaffna District in 2010. Out of the total production of 20,739 tons, 27% is comprised of pelagic species, including *seer* (Spanish mackerel), 2%; *paraw* (dusky jacks), 13%; other brood fish (smaller tuna-like fish), 12%. If shark and skate are included, 35% of the total catch is composed of pelagic species. On the other hand, another 35% is comprised of demersal fish, including rock fish, 18%; shore seine varieties, 6%; prawn, 10%; and sea cucumber, 1%. These figures mean that the fishermen in Jaffna District catch pelagic fish and demersal fish in proportion to the variety of their fishing techniques.

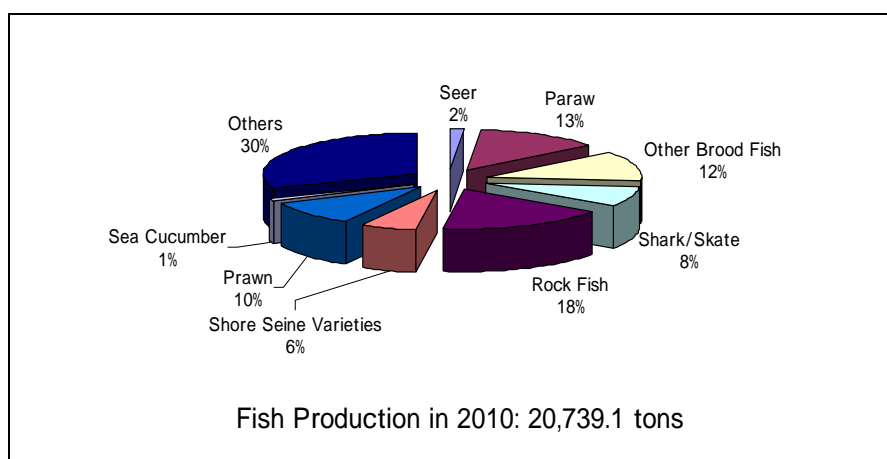


Figure 4- 7: Composition of Fishery Production of Jaffna District in 2010<sup>12</sup>

## 4.2 Concerned Institutions

### 4.2.1 Government Support to the Fisheries Sector

#### (1) MFARD

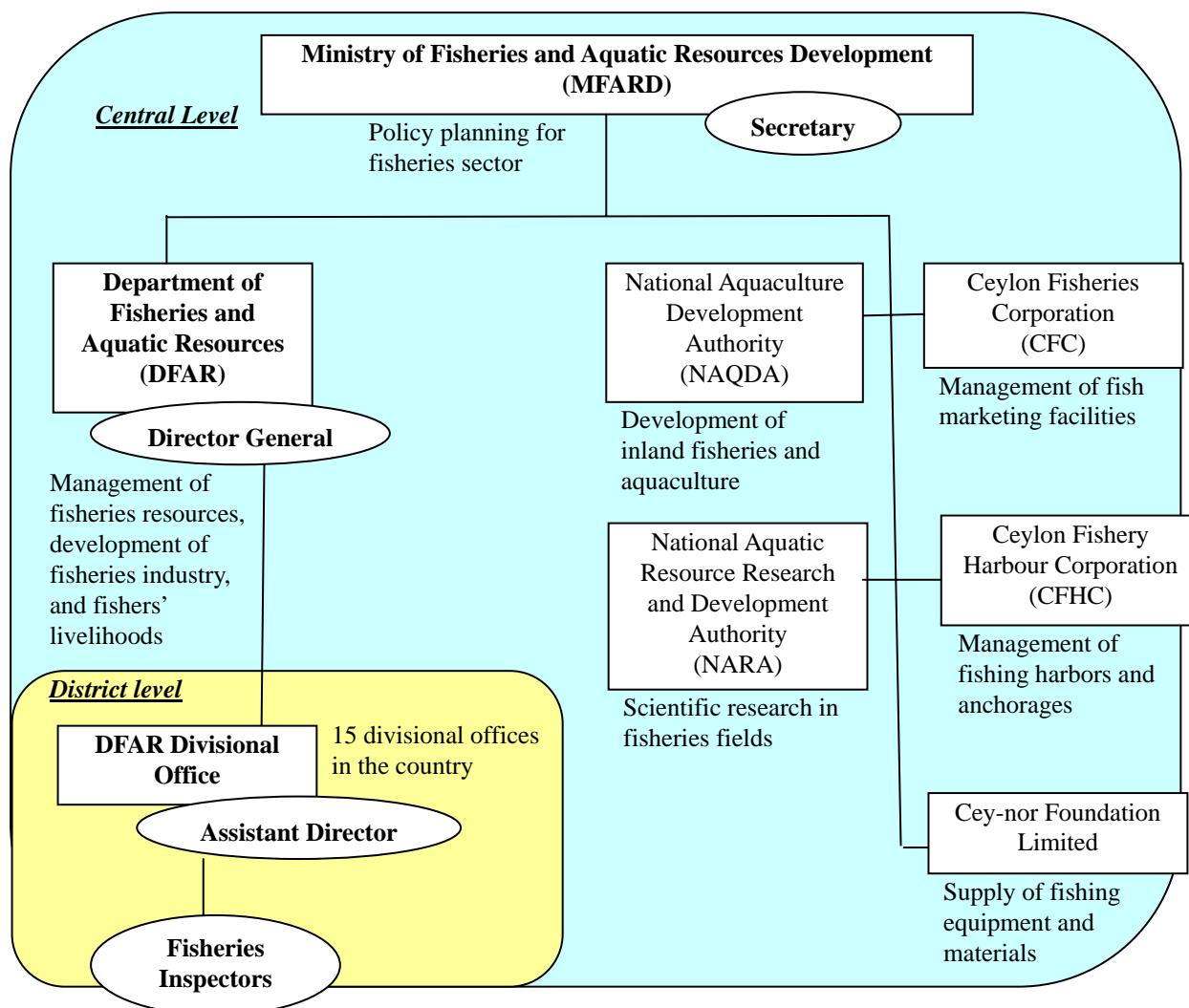
The governmental agency administering and supporting the local fisheries sector is DFAR under the Ministry of Fisheries and Aquatic Resources Development (MFARD). The MFARD is composed of one department,<sup>13</sup> two authorities and three organizations as shown in Figure 4-8. DFAR is composed of 15 divisional offices throughout the country and is responsible for fisheries resources management, development of the fisheries industry, and fishers' livelihoods. The National Aquaculture Development Authority (NAQDA) works for the development of inland fisheries and aquaculture; the National Aquatic Resource Research and Development Authority (NARA) has responsibility for scientific research in fishing and marine culture fields. Three other organizations are the Ceylon Fisheries Corporation (CFC), working for management of fish marketing facilities; the Ceylon Fishery Harbour

<sup>11</sup> Source: Prepared using data in Table 4-1

<sup>12</sup> Source: Prepared using data from Table 4-1.

<sup>13</sup> Department of Coastal Conservation belonged to the MFARD until 20 November 2010. It is responsible for conservation of the coastal environment, and now it belongs to the Ministry of Defence.

Corporation (CFHC), for management of fishing harbours and anchorages; and the Cey-nor Foundation Limited, for the supply of fishing equipment and materials.



**Figure 4- 8: Organization of the Ministry of Fisheries and Aquatic Resources Development**

The MFARD has allocated an annual budget of LKR 200 million for fisheries sector development in Northern Province under the *Divinaguma*<sup>14</sup> Program in 2011. The program's action plan includes supply of fishing boats by means of bank loan; building of a fishery community bank building, community hall, fish center, an outlet for consumers, and an ice-making plant; assistance for strengthening the fisheries inspector and improvement of the fish landing site; inland fisheries development; and a community strengthening programme aimed at additional income for the community people, including post-harvest, aquaculture, and marketing projects.

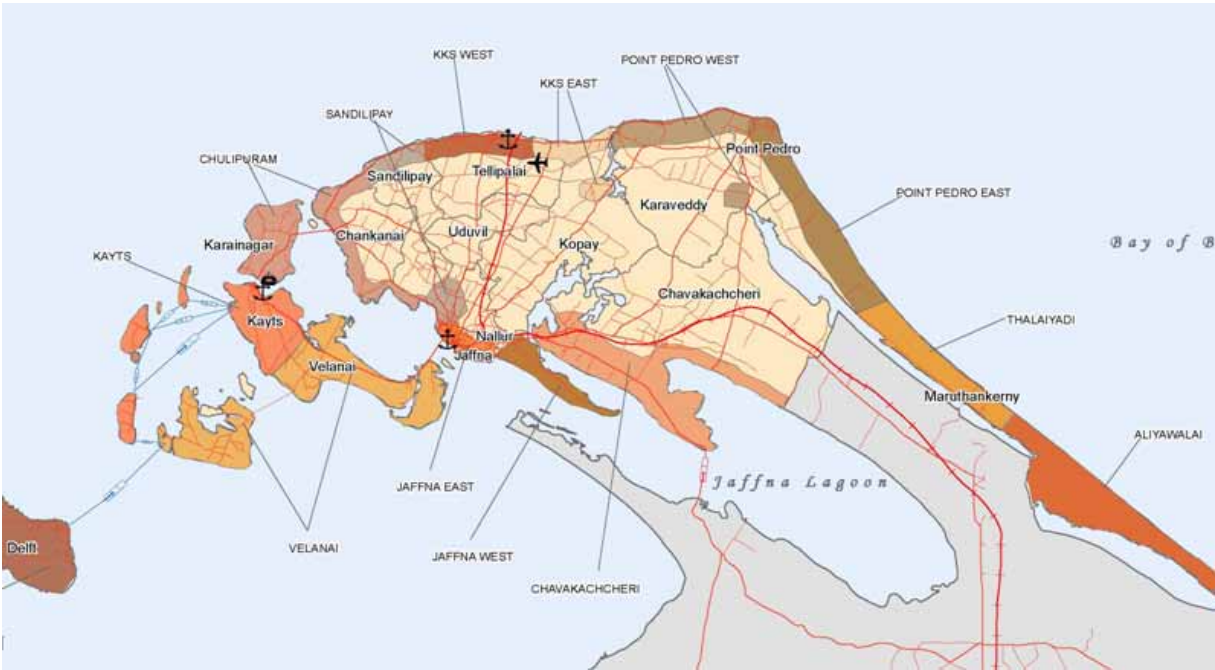
(2) DFAR

DFAR in Jaffna has 20 staff members headed by an assistant director, including 9 fisheries inspectors, 3 fisheries resource management assistants, 7 public management assistants and 1 labour. Jaffna District is divided into 14 FI Divisions; they are Point Pedro East, Point Pedro West, KKS East, KKS West,

<sup>14</sup> *Divinaguma* means "uplift of living standard" in Sri Lankan.



Chulipuram, Sandilipay, Kayts, Velanai, Delft, Jaffna West, Jaffna East, Chavakachcheri, Aaliyavalai, and Thalaiyadi, as shown in Figure 4-9. Present staff of DFAR occupies only 40% of the required cadres, as shown in Table 4- 2. The staff shortage is one of the fundamental problems in DFAR.



**Figure 4- 9: Fisheries Inspector (FI) Divisions in Jaffna District**

**Table 4- 2: Required Cadres and Present Staffs**

Position	Cadres	Present Staffs
Fisheries Inspector Grade I	2	0
Fisheries Inspector Grade II	17	9
Marine Engineering Assistant	2	0
Fisheries Resource Management Assistant	17	3
Public Management Assistant	10	7
Labor	2	1
<b>Total</b>	<b>50</b>	<b>20</b>

At present, DFAR gives priority to the assistance of newly resettled fishers in Maruthankerny with supply of fishing gear, boats, and engines, the promotion of offshore fisheries activity by supporting fishers’ applications for bank loans to purchase multi-day boats, and administrative support for fish landing site development in Pasayoor, Gurunagar, and Senthankulam.<sup>15</sup> In addition, DFAR has provided technical training on dry fish processing, promotion of pushbike fish traders, and crab fattening with cash assistance of LKR 10,000 per capita to 750 community people as of June 2011 under the *Divinaguma* Program. Approximately 4,000–5,000 more beneficiaries in Jaffna District will receive cash assistance in agriculture, fisheries, and other sectors under the same program in 2011.

<sup>15</sup> Renovation of fishery anchorage in Senthankulam started in 2011 with support of the International Organization for Migration (IOM), which component includes deepening the channel.

### (3) NARA

NARA is one of organizations under the MFARD as mentioned above. It is the principal national institute charged with the responsibility of carrying out and coordinating research, development, and management activities on aquatic resources in Sri Lanka. Its vision is to be the premier institution for scientific research in conservation, management, and development of aquatic resources; its mission is to provide innovative solutions for national development issues in the aquatic resources sector by utilizing scientific and technological knowledge and the resource base.<sup>16</sup>

NARA has taken responsibility for several activities aimed at fisheries sector development in Jaffna District, such as an awareness programme on fish aggregating devices (FAD), a resources survey for aquaculture in Northern Province, a study on the impact of bottom trawling, and the introduction of new fishing technology.<sup>17</sup> NARA has been allocated LKR 35 million for its activities in 2011 out of LKR 200 million for fisheries sector development in Northern Province under the *Divinaguma* Program. The organization has also been exerting effort for its activities in Palk Bay Strait, such as aquaculture, fisheries, and environmental and ecological study.

### (4) University of Jaffna

The University of Jaffna (UOJ) also has an important role in fisheries sector development of Jaffna. Department of Zoology in the Faculty of Science organized a workshop on sustainable fisheries development in the northern waters of Sri Lanka on 20 and 21 November 2007, sponsored by the Research Promotion Centre of the University Grants Commission. The proceedings of the workshop include five articles: “Towards Sustainable Fisheries Development in the North”, “Impact of Tsunami on Fisheries Development in the North”, “Alternatives to Sustainable Fisheries Development”, “Fish Handling and Preservation”, and “Constraints in Fisheries Development in the North”. Several members of the UOJ teaching staff and a member of the District Secretariat in Jaffna are the authors of these papers. The proceedings of the workshop point out that the reconstruction of the economy of Northern Province heavily depends on new initiatives and projects for fisheries development.<sup>18</sup>

One of the members of the teaching staff in Department of Geography of UOJ has published a series of essays on fisheries conflict in the Palk Bay between fishermen in Sri Lanka and India.<sup>19</sup> For the harmonized fisheries development in the northern sea, this kind of research work is important to facilitate diplomatic dialogue between the two countries.

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<sup>16</sup> <http://www.nara.ac.lk/12/about%20us/about%20us.html>

<sup>17</sup> Ministry of Fisheries and Aquatic Resources Development, (2010). *Fisheries Sector Development in the Northern Province of Sri Lanka*. Colombo, Sri Lanka, (p.12).

<sup>18</sup> Department of Zoology, Faculty of Science, University of Jaffna. (2007). *Proceedings of the Workshop on Sustainable Fisheries Development in the Northern Waters of Sri Lanka*, Jaffna, Sri Lanka, University of Jaffna, (p. iii).

<sup>19</sup> Dr. A. S. Sosai, (2004). *Indo-Sri Lanka Fishermen Conflict in the Palk Bay Region*, Jaffna, Sri Lanka, Department of Geography, University of Jaffna; Dr. A. S. Sosai, (2004). *Jaffna Peninsula: Present Perspective and Changes on Fishing*, Jaffna, Sri Lanka, The Sri Lanka Journal of South Asian Studies, No. 10 (New Series), (pp.1-16).

#### 4.2.2 Donor Support in the Fisheries Sector

Many foreign donors, including India, Greece, Korea, and Denmark, are interested in fisheries sector development in the Jaffna peninsula. The followings are several donor projects being carried out or in planning:

- The rehabilitation of a fishery anchorage in Pasayoor started in October 2010 with the assistance of UNOPS. The rehabilitation of anchoring points and a breakwater is included in the component with a budget of LKR 25 million. The construction work was halted due to issues relating to the availability of funds from a donor agency of Greece. The donor agency together with UNOPS is currently assessing the possibility of the recommencement of the work.
- Plans are currently underway to develop a fishing harbour in Gurunagar in Jaffna City on the western coastline of the peninsula with Danish assistance, and the relevant studies have now reached the feasibility assessment stage.
- The Korean International Cooperation Agency (KOICA) planned to support the reconstruction of a fishing harbour in Myliddy in the northern Jaffna Peninsula.<sup>20</sup> However, no further progress has been observed. CFHC had earlier planned to develop the Myliddy Fishing Harbour with donor assistance. However, in view of the current developments related to KKS Harbour, uncertainties have emerged regarding the development of Myliddy Fishing Harbour.
- GOSL is planning to obtain Indian assistance to develop and expand a damaged fishing net factory in Jaffna Peninsula. The government is to get LKR 152 million financial assistance from India under its Small Grant Assistance Programme to develop the factory to improve the fishing industry in the north. This fishing net factory is managed by the Ministry of Industrial Development, taken over from Norway by GOSL in 1985. UNDP and the European Union assisted the factory by donating a netting machine under the Recovery and Reintegration Programme in 2009.
- After IOT in 2004, many international donors and NGOs donated FRP boats, outboard engine and nets, including Humedica (Germany), FORUT (Norway), GTZ, church of South India, Manintha Neyam Trust-MNT, Alliance United Development Trust, Norwegian People Aid, Humanitarian Trust, etc., totally planned 2,214 FRP boats in Jaffna District in 2005.<sup>21</sup>
- Sewalanka Foundation supported 124 families by constructing permanent houses; auction centers, community halls, fishermen's resting halls under Tsunami Housing Programme in 2008 and 2009 funded by BMZ-Germany. It also assisted to improve income for target group families in fishing communities in the district and related activities through FCS and the sectors specific training for fishermen under the BMZ Livelihood Project from the year 2005 to 2007 funded by BMZ-Germany. The Foundation has focused their assistance on capacity building for communities in Pungudutivu Island through strengthening Pungudutivu Social Economic Cooperative Society since several years ago.

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<sup>20</sup> Lakehouse Newspapers (Online edition of Daily News) dated 6 November 2010. After the news, the Team confirmed the fact to the Chairman of Ceylon Fishery Harbor Corporation.

<sup>21</sup> Op.cit., Final report of pilot studies for knowledge assistance for proposals for sustainable fisheries development and improved market access by fisheries cooperative societies in the North and East, Sri Lanka, (p.184).

- The Pacific Asia Resource Center Inter-People Cooperation (PARCIC) has assisted socially vulnerable people in coastal communities in Jaffna District by introducing improved dry fish processing. A Japanese expert visited sites and instructed community people how to make it.

#### Relationship with the Road Maps for Fisheries

The Fisheries Sector Development in Northern Province of Sri Lanka<sup>22</sup> contains an action plan for Jaffna District, which among other things, underlines development of three fishing harbours in Myliddy, Thondaimanaru, and Gurunagar by 2013. Development of a fishing harbour in Gurunagar is being planned with Danish assistance, and KOICA expressed their interest to support the reconstruction of a fishing harbour in Myliddy. PDP Jaffna has conducted pre-feasibility study for construction of a fishing harbour in Point Pedro where is one of fish production centers in the district and involves Thondaimanaru on its western edge. Therefore, harmonized works are underway in fishing harbour development in the district so far, and the Road Map for Offshore Fisheries Development was prepared on the basis of this situation.

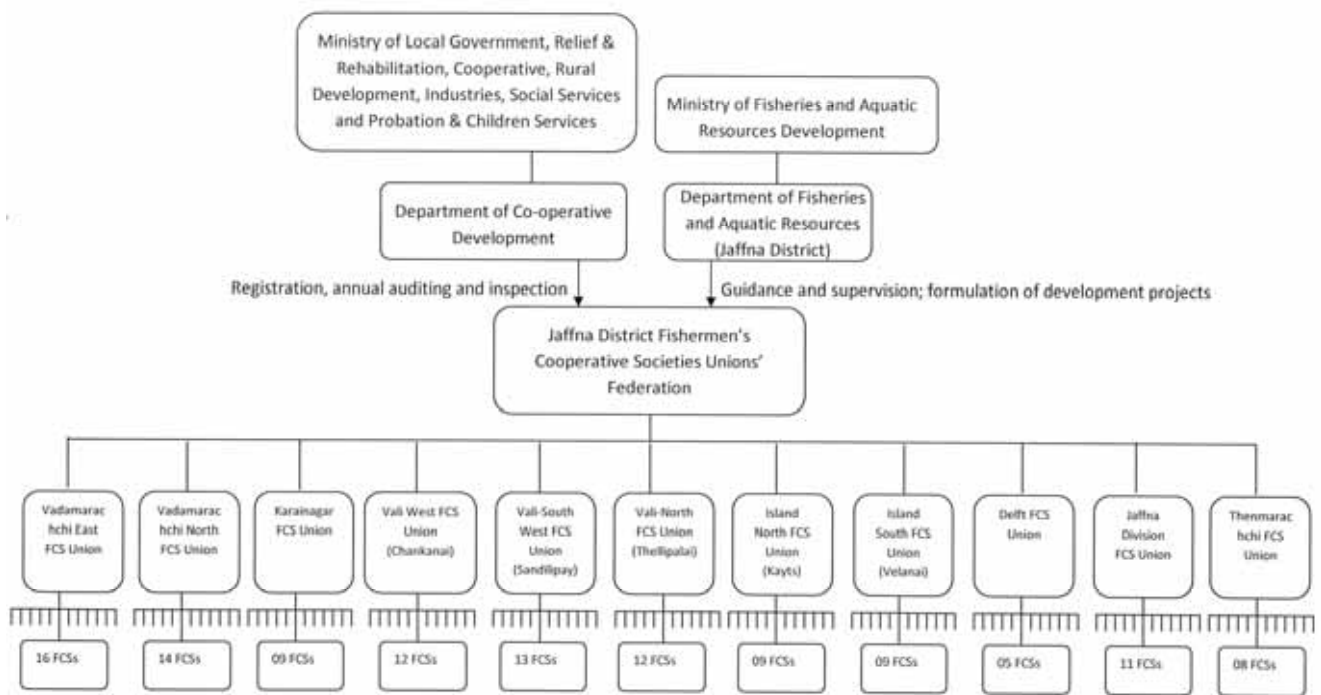
With regard to the rehabilitation of other fisheries infrastructures such as fish auction centers, warehouses, fishermen's resting halls, etc., many international donors and NGOs such as Sewalanka Foundation have exerted their effort after the IOT as mentioned above. The Road Map for Sustainable System for Coastal Fisheries is placed along the line of these rehabilitation works with strengthening fishermen's organization in coastal communities.

#### **4.2.3 CBOs in the Fisheries Sector**

There are 118 registered FCSes in the district, out of which 106 societies are active. These FCSes belong to 11 FCS Unions organized on the FI Division level, and the only FCS Unions' Federation on the district level. They are registered by DCD under the Ministry of Local Government, Relief & Rehabilitation, Cooperative, Rural Development, Industries, Social Services, and Probation & Children Services, which functions to implement annual auditing and inspection. The FCSes are also supervised by DFAR in Jaffna in terms of guidance and supervision to formulate development projects (Figure 4-10).

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<sup>22</sup> Please refer to 4.2.4 Existing Plans in this report.



**Figure 4- 10: Organizational Structure of FCSes in Jaffna District**

Generally, these societies have been weakened by the internal conflict. As a consequence, fishermen who are members of the societies and are actively involved in fishing encounter difficulties in getting needed organizational support from their FCSes. This is evident from the fact that only ten societies in Jaffna District<sup>23</sup> are operating financial institutions under the name and style of the Idiwala Fisheries Bank, which has been incorporated by DFAR to establish itself in each FCS for the benefit of fishing communities.

Nevertheless, FCSes are still the most important organizations for fishermen in coastal communities, and many socially vulnerable people, such as returnees and those in female-headed families, earn small incomes by engaging in marginal works associated with FCSes. Strengthening the economic activities and social functions of FCSes would help such people improve their standard of living. Table 4- 3 shows the activities and issues of the present FCSes in the district. Appendix 4-1 refers to the present status of the individual FCSes and their activities.

**Table 4- 3: Activities and Issues of FCSes in Jaffna District**

Activities	Issues
<ul style="list-style-type: none"> <li>- Providing fish landing facilities</li> <li>- Managing fish auction</li> <li>- Facilitating for fish marketing</li> <li>- Providing credit</li> <li>- Maintaining statistical report</li> <li>- Coordinating conflict solution among members</li> <li>- Contributing communities</li> </ul>	<ul style="list-style-type: none"> <li>- They lost many facilities during the conflict.</li> <li>- Auction is often done on the open space.</li> <li>- They face keen competition with dealers from Colombo.</li> <li>- Idiwala Bank does not work well.</li> <li>- Production statistics are often poor.</li> <li>- Conflicts are often occurred because coastal fishing grounds are limited and many small fishing boats are operating there.</li> <li>- Income sources of FCSes are limited.</li> </ul>

<sup>23</sup> According to DFAR, those are such FCSes as Myliddy, Palaly, Mareesankudal, Sivagowry, Ambal, Chulipuram West Alaimakal, Nainativu North, Thuraiyoor, Ambigainagar, and Alaiyosai.

#### 4.2.4 Existing Plans

This section introduces the contents of the existing two development plans in the fisheries sector: one for the whole country and another for Northern Province. (1) is a national level policy paper, and (2) is a provincial-level policy paper, both of which are issued by the MFARD.

- (1) “Ten Year Development Policy Framework of the Fisheries and Aquatic Resources Sector 2007-2016, March 2007,” by the Ministry of Fisheries and Aquatic Resources Development in 2007
- (2) “Fisheries Sector Development in Northern Province of Sri Lanka,” by the Ministry of Fisheries and Aquatic Resources Development in 2010

- (1) Ten Year Development Policy Framework of the Fisheries and Aquatic Resources Sector 2007-2016  
(the Ministry of Fisheries and Aquatic Resources Development, 2007)

This is the national-level fisheries development policy, which states its vision that Sri Lanka is to become a leader in the south Asian Region in sustainable utilization of fisheries and aquatic resources.

The major issues constraining the development of the fisheries sector are:

- Non-availability of reliable and up-to-date marine fish resources data
- Weakness of fisheries management
- Lack of proper fish landing and quality maintenance facilities
- Lack of capabilities in deep sea fishing
- The conflict in the north and the east (as of 2009)
- Inadequate application of fishing technologies
- Poor fishing infrastructure
- Difficulty in monitoring Exclusive Economic Zone
- Inadequate investment in the sector
- Inadequate research, training, and extension
- Degradation of the coastal and marine environment

This report mentions various policy measures required to address these issues and achieve the following indicators during the ten-year plan period from 2007 to 2016:

- Level of fish production from 389,170 ton to 493,602 ton (27% up)
- Per capita availability of fish and fish products based on local production from 19kg to 22kg (16% up)
- Contribution of the fisheries sector to GDP from 1.9% to 4.0% (110% up)
- Export volume from the sector from 21,300 ton to 45,432 ton (110% up)
- Employment generated in fishing and associated activities from 685,500 persons to 795,000 persons (16% up)
- Expansion of offshore fleet from 2,464 boats to 3,243 boats (32% up)

### Relationship with the Road Maps for Fisheries

The Road Maps for Fisheries Development presented in Chapter 9 of this report are consistent with the national development policy mentioned above in aiming at sustainable utilization of fisheries and aquatic resources based on the recognition of the present weakness of fisheries management, lack of proper fish landing facilities, and lack of capabilities in deep sea fishing, etc.

#### (2) Fisheries Sector Development in the Northern Province of Sri Lanka (the MFARD, 2010)

The MFARD submitted this report in July 2010, stating that “prior to the internal conflict in the Northern Province, fisheries sector played an important role in the regional economy and also contributed substantially by means of providing employment, income and the nutrition to the communities. - Now there is no obstruction to fisheries development as the internal conflict is over.” Based on this recognition, they prepared an action plan for Northern Province. In the case of Jaffna District, it plans by 2013 the introduction of 150 one-day boats and 15 multi-day boats, the development of 4 fish landing sites/coast protections, 13 anchorages/jetties, and 3 fishing harbours in Myliddy, Thondaimanaru, and Gurunagar. It also plans to promote an awareness programme on FAD, resources surveys for aquaculture, a study on the impact of bottom trawl fishery, and the introduction of new fishing technology.

### Relationship with the Road Maps for Fisheries

The Road Maps for Fisheries Development in Chapter 9 of this report are consistent with the action plan mentioned above in emphasising introduction of multi-day boats, development of fishing harbours, and resources surveys for aquaculture, etc.

## **4.3 Key Issues and Challenges**

### **4.3.1 Fisheries Infrastructure**

There are 128 landing sites scattered along the coastline of the district. The locations of the main landing sites are marked in Figure 4-11. The only fishing harbour, though currently not in operation, is located in Myliddy on the northern coast of the peninsula (shown with a red circle).

With the end of the conflict and the relaxation of the restrictions imposed, fishing activities have resumed or expanded in many of the landing sites, even though most facilities are in a dilapidated state and in need of restoration. Currently, fishing activities are permitted in many of the sites, with a prior registration system with relatively minor restrictions imposed. A few of the sites are still within HSZs and thus inaccessible for fishing communities. Although the fishing harbour in Myliddy had been operational in 1981, the fishery activities ceased there a few years later because the Myliddy area came under a new HSZ. The harbour is still inaccessible for the fishing community.



**Figure 4-11: Main Landing Sites in Jaffna District**

The FI Divisions in the Jaffna area (Jaffna West and Jaffna East) and Point Pedro area (Point Pedro East and Point Pedro West) are the most productive areas in Jaffna District. A strong need is felt by local fishermen for strengthening the fisheries infrastructure there.

The condition of fisheries infrastructure for production, distribution, and consumption, such as jetties, fish auction halls, and fish markets, is generally poor, as a result of the prolonged conflict and two severe natural events, IOT on 26 December 2004 and the Cyclone on 28 October 2008. Many fishermen sell fish in the open air and without shade, which quickly spoils the freshness of and thus the value of the catch. The Team repeatedly visited local FCSes to collect basic information on the status of their activities and the condition of infrastructure. The result of the study is contained in Appendix 4-1. On the basis of the study, the Team has recommended assisting eight FCSes in strengthening their activities by constructing facilities such as fish auction halls and providing some technical and management training courses.<sup>24</sup>

### 4.3.2 Associated Industries

As of July 2011, 11 ice plants are operating in the district with a total production capacity of 33.3 ton per day, including two newly established ice plants assisted by the MFARD and managed by FCS Unions in Point Pedro and Gurunagar.<sup>25</sup> Yet, the combined production capacity of these plants is still far short of the present demand for ice in Jaffna. Fishermen can get ice brought by fish buyers from the south such as Colombo at a lower price than locally produced ice. This price gap is caused by the difference of expenses for electricity. Therefore, the ice producers in Jaffna District have a handicap in marketing.

<sup>24</sup> Finally, the Team proceeded with construction of fish auction halls at five proposed sites due to obstacles of land ownership.

<sup>25</sup> Department of Fisheries and Aquatic Resources, *Fish production statistics*, and interview with a staff member of DFAR in Jaffna.



There are nine boatyards in the district. Four are located in Jaffna DS, two are located in Sandilipay, two in Point Pedro, and one in Karainagar. Most of these boatyards build 18-foot FRP boats or the traditional type of FRP boats commonly known as *Vallam* in the local language. Only one private boatyard has commenced building 28-foot one-day boats, as of January 2010, and started to build 32-foot multi-day boats in 2011 without any outside assistance in terms of finance and technology. It has received 13 orders for 36-foot multi-day boats (10 from Mulltivu and 3 from Point Pedro) as of July 2011.<sup>26</sup> The production of small boats by these boatyards seems to be increasing day by day, and they are approaching the saturation point in the district's coastal fishing ground. For more details on fisheries-associated industries, please refer to Appendix 4-2.

### **4.3.3 Fisheries Management**

As already discussed, the number of small fishing craft has increased rapidly in Jaffna District since 2006, which can exploit the fishing ground theoretically within 15 sea miles from the shore. In many cases, however, they actually operate in the fishing ground near from the shore due to weather conditions, insufficient ice, and other obstacles. This has led to serious apprehension in the minds of fisheries sector authorities (i.e., DFAR and other relevant agencies and organizations) that the destruction of coastal fishery resources could be the inevitable consequence in the future. To prevent such a calamity, the fisheries sector authorities have taken note of the necessity for taking prompt actions, such as the establishment of a fisheries management system in Jaffna District.

In Jaffna, except the nationwide fishery laws and regulations, no such fishery regulations have come into effect at the district level. However, it has been observed in several cases that some FCSes have taken the initiative to create management systems for their members' fishing operations. For instance, Vadamarachchi North FCS Union has implemented fishing days' restriction in accordance with their fishing techniques: fishing boats conducting drift net fishing should operate from the fifth day of the full moon to the fifth day of new moon; fishing boats conducting bottom gill net fishing should operate from the fifth day of new moon to the fifth day of the full moon. Thus, each of their fishing operations is restricted for 15 days per month. Currently, coastal fishing grounds are being exploited by an ever-increasing number of small fishing boats. This should be controlled as soon as possible by taking advantage of the management systems that have been initiated by local fishermen and practically managed by societies or unions, as observed in fishermen of Vadamarachchi North.

The Team has recommended the implementation of a fishery management project aimed at the further integration and coordination of the present practices of self-control, regulation, and traditional customs by recording an inventory of these practices and workshops.

Fishery production statistics are the basis of scientific fishery management. However, the site observations of the Team at several fish auction centers and fish landing sites revealed that fish were

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<sup>26</sup> According to an interview with an owner of New Ajasmin Industrial Fiberglass Molding Boat Yard on 19 May 2010 and his speech during a Workshop for Development in Jaffna District (Fisheries Sector) held on 15 July 2011.

auctioned and sold to buyers not by weight but by bulk, except for species such as shrimp, lobsters, and crab. It is thus difficult for FIs to accurately quantify, rather than estimate, fish production per boat by this method, which is the primary figure for the statistical calculation of fish production. The establishment of scientific fishery statistics requires the introduction of a system of calculation that can accurately quantify the primary figure. For more details on fishery management and statistics, please refer to Appendix 4-2.

#### 4.3.4 Strengthening CBOs in the Fisheries Sector

The MFARD has begun to promote the formation of new fisheries CBOs called Rural Fisheries Organizations rather than the FCSes. The FCSes are registered by DCD, as mentioned above, whereas the Rural Fisheries Organizations are registered by DFAR. Their vision is economic and social uplift of fishing societies with suitable measures for modern world, and their mission is management and guidance of fishing communities with sustainable modern technology utilized by the fisheries industry.<sup>27</sup> The members of the Rural Fisheries Organizations have the advantage of receiving bank loans, insurance, and other assistance from the government. This is a policy of the MFARD to reorganize fishers in the country, since the number of FCSes and their memberships have remained stagnant at low levels for many years over the country, as shown in Table 4-4.

**Table 4-4: Number of FCSes and Their Memberships in the Country<sup>28</sup>**

<b>Description</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
No. of FCSes	439	525	548	561
Memberships	57,827	73,089	91,095	91,315
Male	47,178	59,284	72,640	72,640
Female	10,649	13,805	18,455	18,675

Table 4-5 shows the number of Rural Fisheries Organizations and their members in 2010. The MFARD has organized 892 Rural Fisheries Organizations with 61,107 members throughout the country. Of the total, 622 are coastal organizations with 46,134 members, and 270 are inland organizations with 14,973 members in 2010.

<sup>27</sup> Department of Fisheries and Aquatic Resources, *National Fisheries Federation (Tamil)*, Colombo, Sri Lanka.

<sup>28</sup> Source: the MFARD

**Table 4-5: Number of Rural Fisheries Organization and Their Members (2010)<sup>29</sup>**

District	No of Rural Fisheries Organizations			No of Members		
	Coastal	Inland	Total	Coastal	Inland	Total
Colombo	17	3	20	924	150	1,074
Gampaha	55	3	58	3,278	241	3,519
Kalutara	37	15	52	3,099	413	3,512
Kandy		2	2		154	154
Matale		14	14		1,000	1,000
Nuwara Eliya		8	8		426	426
Galle	41	11	52	1,859	1,504	3,363
Matara	35	10	45	2,311	303	2,614
Hambantota	39	16	55	2,414	600	3,014
Jaffna	60		60	6,411		6,411
Mannar	29		29	2,670		2,670
Mullaitivu	14		14	1,872		1,872
Kilinochchi	13		13	699		699
Batticaloa	89	16	105	7,696	1,158	8,854
Ampara	37	13	50	2,791	674	3,465
Trincomalee	44	9	53	3,717	530	4,247
Kurunegala		9	9		401	401
Puttalam (Puttalam)	61	18	79	3,399	1,043	4,442
Puttalam (Chilaw)	51	3	54	2,994	118	3,112
Anuradhapura		31	31		2,499	2,499
Polonnaruwa		38	38		2,100	2,100
Badulla		14	14		415	415
Monaragala		31	31		614	614
Ratnapura		5	5		600	600
Kegalle		1	1		30	30
<b>Total</b>	<b>622</b>	<b>270</b>	<b>892</b>	<b>46,134</b>	<b>14,973</b>	<b>61,107</b>

Table 4- 6 clarifies the number of fishers organized by FCSes and Rural Fisheries Organizations and the ratios of those numbers against the total number of active fishers in Jaffna District and the country. The ratio of fishers organized by FCSes in Jaffna District is very high, at 96%, compared with the ratio in the country (41%); likewise, the number of fishers organized by Rural Fisheries Organizations in the district is higher (34%) than the one in the country (21%).

**Table 4- 6: Organized Fishers in Marine Fisheries (2010)<sup>30</sup>**

Description	Fishers Area	Over the Country	Jaffna District
Active Fishers (a)		222,742	18,690
FCS	No. of Members (b)	91,315	17,970
	(b)/(a) x 100 (%)	41	96
Rural Fisheries Organization	No. of Members (c)	46,134	6,411
	(c)/(a) x 100 (%)	21	34

Jaffna District has 60 Rural Fisheries Organizations with 6,411 members as of 2010.<sup>31</sup> According to information of DFAR, it targets establishing 118 Rural Fisheries Organizations in the district, which is the same number of the present FCSes. Rural Fisheries Organizations organized in the district often have the

<sup>29</sup> Source: the MFARD

<sup>30</sup> Source: The MFARD and DFAR in Jaffna

<sup>31</sup> According to information of DFAR in Jaffna, 71 Rural Fisheries Organizations are organized with 7,109 members as of 10 July 2011.

same executives and members as do the FCSes in respective areas. In this sense, Rural Fisheries Organizations appear to be duplications of FCSes in executives, members, and locations. Jaffna District has an advantage in organizing Rural Fisheries Organizations because most of the fishers in the district are already organized by FCSes.

On the other hand, it is true that the FCSes in Jaffna District have several weak points, too. They include generation issues and the necessity of capacity building for FCS core staff. Many FCSes have capable staff members who have made those FCSes the core CBOs in coastal communities for many years. However, the capable staff members have aged, and now is the time to hand over their roles to the younger generation.

It is necessary for young staff members of FCSes to build their capacity in many fields. For instance, they need to learn modernized organization, wisdom for sustainable fishing practices, offshore fisheries exploitation and aquaculture development, wise management of fisheries households, and knowledge to solve any other necessary problems in the present context.

#### **4.3.5 Offshore Fisheries**

Offshore fisheries resources are still untapped by Jaffna fishermen, primarily because they have only a few multi-day boats, purchased recently. Jaffna District had 23 multi-day boats as of July 2011 which were owned by fishermen in the district. DFAR has received approval from the MFARD to issue bank loans of LKR 12 million per capita for purchasing a multi-day boat. This initiative is expected to increase the number of multi-day boats in the near future. The fishermen have to repay the loan amount within six years.

The first multi-day boat in Jaffna District, managed by the FCS Unions' Federation, was launched on 17 November 2010, with six crew members. Four of them were skilled fishermen from Negombo and were given a mission to train two other crew members from Jaffna. Its first trip consisted of 11 days with five drift net operations, which captured two tons of skipjack at about LKR 1 million in value.<sup>32</sup> The production is expected to increase further as the crew becomes accustomed to their operation. The fishing ground is about 170 sea miles from the shore. This kind of multi-day boat operation should be further promoted in Jaffna.

Infrastructure development including fishing harbours must proceed in parallel in order that multi-day boats can moor and get necessary inputs for their fishing operations at convenient sites for fishermen. Offshore fishing ground exploitation with a multi-day fleet is a good solution for the well-balanced fisheries resources exploitation to lead sustainable fisheries development.

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<sup>32</sup> Result of an interview with crews of the multi-day boat managed by Jaffna District FCS Unions' Federation on 26 November 2010.

#### **4.3.6 Aquaculture**

There was an opinion that most of the brackish water sources in Jaffna District were unsuitable for culturing mollusks, seaweed, and sea bass, because their salinity was found to be above an acceptable range during the greater part of the year.<sup>33</sup> Causeways constructed across the lagoon have cut off most parts of the lagoon from the outer sea, resulting in considerable water evaporation and high salinity levels in the lagoon area. Even if this kind of opinion may reflect the truth, the district still has extensive marine water areas suitable for aquaculture development outside the lagoon, for example, around the islands of Velanai, Pungudutivu, and Karainagar.

The apprehensions are that the coastal fishing ground could be depleted in the near future owing to ever-increasing numbers of small fishing craft that continue to exploit this fishing ground. In order to avoid depletion, we must urgently find a solution; one available possibility is aquaculture development. Appendix 4-2 records past aquaculture experiments and the present possibilities for aquaculture development. The Team has recommended the implementation of aquaculture pilot projects for seaweed and sea cucumber, with the objective to educate residents in coastal communities.

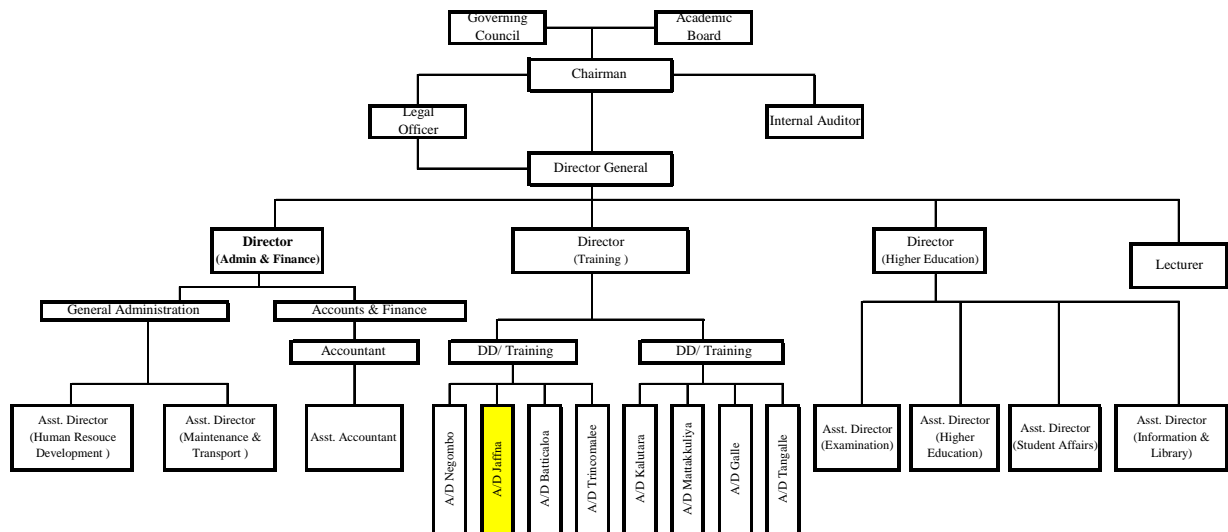
#### **4.3.7 Fisheries Education and Training**

The College of Fisheries and Nautical Engineering is responsible for fisheries education and training in Jaffna District. It is the only institute for practical education in the field of fisheries in not only the district but also Northern Province. The college is one of eight similar colleges in Sri Lanka under the auspices of the National Institute of Fisheries and Nautical Engineering (NIFNE), which was established in 1973 (Figure 4-12).

The college has conducted mobile training for 3,000 people and residential training for 400 people during the past 10 years, targeting fishermen, FCS members, and youth. Those training include community-based fishery training implemented by NGOs and donors as they entrust the implementation of the training to the college. Nevertheless, it faced challenges in accomplishing its mission; the challenges include a shortage of staff, lack of facilities, and poor teaching aids because the original building of the college was destroyed in 1990 due to the conflict. The college re-started the training courses with two teaching staff at the rental house in December 2000. Appendix 4-3 provides more details on the status of the college.

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<sup>33</sup> Kithsiri, H.M.P., et al., (2009). *Site suitability report for the culture of bivalve mollusks, sea weed and seabass in Northern Sri Lanka*, Colombo, National Aquatic Resources Research and Development Agency, (p.45).



**Figure 4- 12: Organizational Structure of the National Institute of Fisheries and Nautical Engineering**

The Team has recommended assisting the college by reconstructing the school building and providing training and equipment in order to strengthen its education and training resources and facilities. Please refer to Chapter 7 for details of support to the college as IRC of a pilot project: FC-6. The training with these facilities and equipment helps capacity building for people in the fisheries sector in the district and in Northern Province: fish-processing training will benefit socially vulnerable people such as female-headed families who have limited income sources at present; lectures and practices on fishing operations and navigation by means of one-day boats with newly developed navigation equipment and various engineering exercises in the workshop will help offshore fisheries development to avoid deterioration of coastal fisheries resources and to develop safe operations to save human lives.



**Chapter 5**  
**Basic Development Policy Framework**

## Chapter 5 Basic Development Policy Framework

### 5.1 Grand Vision for Jaffna toward 2020

#### 5.1.1 Introduction

Chapter 2 was primarily intended to present a general portrait of Jaffna District, but it also outlined economic, social, and environmental challenges the district is currently confronting. Chapters 3 and 4 provided a wide range of basic information regarding the present situation of the agriculture and fisheries sectors in the district. The previous chapters also introduced the existing development plans in general, and for the agriculture and fisheries sectors in particular. Although these existing plans certainly indicate directions that future development of the region should head in, they are at times no more than a long list of desired projects and investment items. Sector development plans need to be given structure in a time framework. Also important for sector plans are the prioritization of possible projects and a set of concrete actions required. In addition, realignment should be ensured between the desirability of projects and the availability of budgetary resources for them as well as the implementation capacity of stakeholders.

This chapter is intended, first, to discuss a framework for the basic development policy in the district and, second, to prepare sector development plans for agriculture and fisheries. For the first purpose, the chapter will present the “Grand Vision for Jaffna to 2020,” which is a long-term vision, as opposed to a detailed plan, to envisage the future of Jaffna in the post-conflict era. Subsequently, policy requirements and implications in macro-economic, environmental, and social (community) dimensions will be discussed in terms of their effects on agriculture and fisheries development in the district.

Before the discussion of the Grand Vision for Jaffna to 2020, let us comment here on the uniqueness of a developmental transition currently taking place in Jaffna. This is the subject briefly touched on in “5. Framework for Development Planning” in Chapter 1 (p.5) as follows:

*The district is in transition from the urgent relief stage during and immediately after the conflict to the rehabilitation stage and eventually to the longer-term development stage. However, these three stages are not mutually exclusive and actually exist simultaneously in today's Jaffna, and therefore the requirements specific to each of these stages must be taken into consideration in a quasi-independent manner.*

In short, it is an oversimplification to presume that the district is entirely within a specific stage in the process of developmental transition. Although it is unquestionable that the district has more or less moved out of the urgent relief stage, which was relevant during and immediately after the conflict, has come to the rehabilitation stage, and will eventually move to the longer-term development stage, this does not contradict the fact that these three stages co-exist to some extent. We can assume that the



longer-term development stage will prevail as time passes by, but it is hard at present to assert that any specific phase of the transition is more important than others in the district.

For instance, after A9 opened at the end of the conflict, the production of onions quickly recovered to the pre-conflict level as farmers aggressively took advantage of a new market in the south. Market-driven development followed immediately after the recovery of access to a larger market. Rice and livestock production levels also are moving out of the rehabilitation phase. On the other hand, coconut production will likely remain in the rehabilitation stage for at least another several years. The nature of coconut cultivation demands a much longer period of time for coconut production to catch up to the pre-conflict production level. Grape production also needs new varieties together with considerable effort from farmers to redevelop vineyards, which will take many years.

In the fishery sector, coastal fisheries in Jaffna District have been steadily recovering despite weak infrastructure. Coastal fisheries, of course, require more rehabilitation in terms of infrastructure, marketing, and institutional capacity, among other things. Now, however, a new type of concern is quickly emerging regarding potentially excessive fishing efforts. People are beginning to wonder how to deal with the ever-increasing fishing efforts concentrated in coastal fisheries.

An option is to convert the efforts to other sub-sectors, typically to offshore fisheries and aquaculture. This requires “futuristic” technologies and a longer-term development approach in the district. Jaffna had been isolated from the rest of the world for the three decades, and is therefore not familiar with either such technologies or the long-term approach. As a matter of fact, the Team’s recommendations for Jaffna’s fishing sector are nothing special in today’s technologically advanced world fisheries, but they look somehow “futuristic” for those in Jaffna’s fisheries. The fact that these technologies did not exist when the conflict began renders development based on the new technologies anything but recovery or rehabilitation.

On the other hand, a portion of the population in many fishing communities is made up of returnees, and they desire decent houses and traditional nets for coastal fishing. They live in the reality of the early rehabilitation stage, or even in the humanitarian aid stage.

All of these are simultaneous realities in Jaffna. It is hard to say that any one need is more important than other needs. Keeping in mind this wide spectrum of development needs observed in Jaffna, the individual donors and NGOs must determine which stages and aspects they should focus on in their operations.

### **5.1.2 Grand Vision for Jaffna toward 2020**

To predict the future of Jaffna in a sea of economic and political uncertainties is nothing but an intellectual venture. Still, such a venturesome practice needs to be conducted to plan effective

development in the district, not just for the immediate future, but also for the middle-term future. An attempt to foresee the future will help to place the individual economic sectors and specific issues on right track. For this purpose, we will discuss here three subjects that are considered particularly relevant when pondering the potentiality and challenge of Jaffna over the next decade.

The first of the three is the estimated future economic growth. The future growth rates in different sectors of Jaffna District will be estimated, together with implications emerging from them. The sectoral compositions of Jaffna and of Northern Province *vis-à-vis* that of the entire country must also be examined, since this will help create an understanding of the unique characteristics associated with Jaffna's future.

Second, we will review the perceived challenges as well as opportunities inherent in the individual economic sectors of Jaffna. Although to do so thoroughly is beyond the time and norms allocated to the Team, which has focused on agriculture and fisheries, a quick review of them is without doubt conducive to understanding the relative significance of the development of agriculture and fisheries in the framework of a broader picture of Jaffna's economic development.

Third, we will discuss the strategic advantages of Jaffna. The Team believes that light should be shed on the future development of Jaffna from the national strategic point of view, in addition to local perspectives. Since Jaffna is predominant in many aspects within Northern Province and will continue to be so, how to envision the future of Jaffna is of crucial importance not only for Jaffna, but also for Northern Province and for the entire nation. Having played the leading role in the north, will Jaffna continue to maintain its central position, or be gradually marginalized? The Team believes that the answer to this question lies in a strategic plan for Jaffna.

This section will depict these three subjects over the next few pages. Let us begin the discussion with the analysis of comparative sectoral growth.

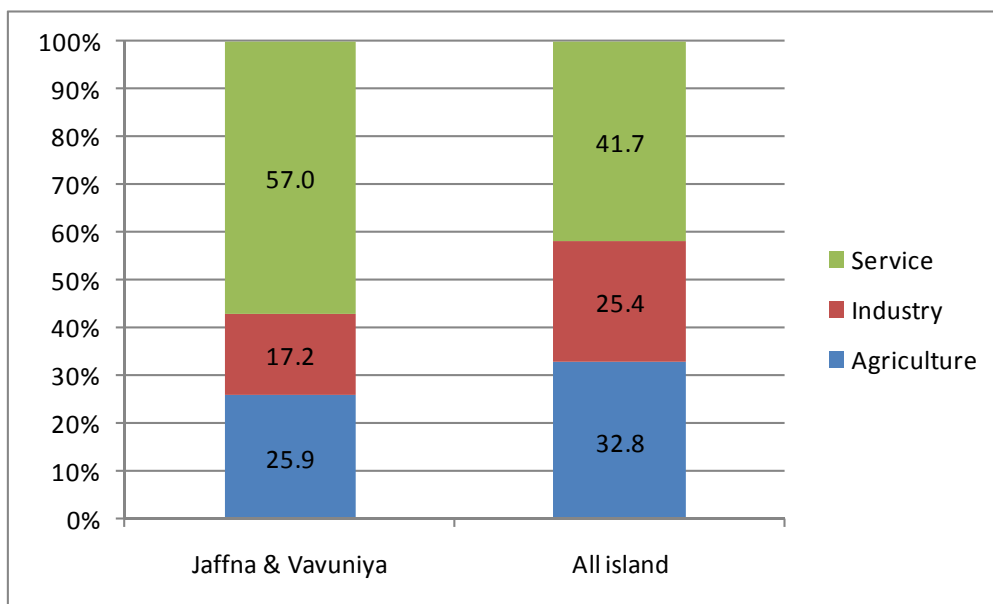
### **Economic Growth Forecast by Segment**

Based on the province-wise GDP statistics from the national economic account published by the Central Bank of Sri Lanka, a prediction was made about the future economic growth of Jaffna District, with a set of assumptions as listed below:

#### Assumptions

1. The annual GDP from Jaffna District in 2010 is equivalent to or slightly more than the 15% registered in the whole Northern Province.
2. The current boom of the primary industries such as agriculture and fisheries in Jaffna contributes considerably to the current high economic growth. This is largely a result of the appearance of the new market for Jaffna's vegetables and fish in Colombo and other areas of the south, which has suddenly became available after the normalization of the A9 highway. After 2012, however, this

- “bonus” effect will diminish and more stable but lower economic growth will prevail in the primary industries. Toward 2020, the economic growth of the primary industry will hover around 3–4% unless some dramatic development takes place in fruit production, aquaculture, or offshore fisheries.
3. The secondary industries, typically manufacturing and construction, are also supporting the robust post-conflict economy. As discussed in Chapter 2, the contribution of the construction sector is substantial, though it is hard to quantify. The construction of houses has become a common scene in the district since the eventual end of fighting, and, in addition, infrastructure development projects, large and small, are being implemented almost everywhere to rectify the negligence and decay of the last three decades. The construction boom will continue for at least another three or four years.
  4. On the other hand, the manufacturing sector does not seem to be enjoying immediate growth due to the lack of a reliable infrastructure base and the presumed uncertainty of the socio-political environment for investors. However, a number of the on-going infrastructure development projects will be completed by around 2015, and consequently public utilities such as electricity, water, and roads, as well as other transportation facilities will be substantially upgraded.
  5. It would be, of course, very difficult to predict what is forthcoming along the socio-political line, but in the long run, optimism can be justified here, too. Effects of the improved infrastructure alone will enable growth of more than 10% for the secondary industries during the coming decade. In other words, even if considerable capital inflow from the outside is not realized in the near future, the local manufacturing was in such an extremely bad situation during the conflict and isolation that its recovery will very likely take place with local capital alone.
  6. If, on the other hand, the socio-political environment adequately improves as well in the near future, the manufacturing sector, and to a lesser extent the construction sector, will witness super growth with the accelerated FDI from Indian firms and Tamil diaspora investors as well as enhanced investment by national firms from Colombo. In this case, the predicted growth rates of the secondary industries would require an upward revision.
  7. The tertiary industries will not be able to grow as remarkably fast as the other two economic segments. This is primarily because the ratio of the tertiary segment to the other two segments is already abnormally high in Jaffna. Take a look at the graphs below. They show a striking difference between Jaffna (plus Vavuniya) and the whole country in terms of the composition of the three segments in 2003/2004. The service segment (the same as the tertiary industries) in Jaffna accounted for 57%, which was 15% higher than the national average. This does not necessarily reflect the economic advancement of the district, which the larger share of the tertiary industries normally implies; on the contrary, it reflects the heavy presence of security force personnel in Jaffna. This presence of security force personnel is expected to be reduced within a few years. This means, however, that the growth stemming from genuine development in the service sector in the post-conflict era will be less visible because it will be offset to a considerable extent by the ebbing security force presence, which is statistically interpreted as a decline in the service sector.



**Figure 5- 1: Ratio of employment by sector for Jaffna and Vavuniya and the whole country in 2003/04<sup>1</sup>**

8. Nonetheless, the reduced presence of the security force will not entirely negate the growth of commercial activities in the service sector. Practically, Jaffna's status as the center of commercial activities in Northern Province will be further strengthened over time, particularly after the rehabilitation of the Palaly Airport and the KKS Harbour. In essence, we expect 5-7% net growth in tertiary industries even though some percentage points are offset by a reduced number of security force personnel.
9. Assumptions do not include one concerning population growth. One reason for this is uncertainties regarding the current population as well as future population in Jaffna District. Neither of them can be certain particularly before the results of an on-going census are published toward the end of 2011. The second reason is that Sri Lanka's population growth is less than 1% in 2011 and is rather small vis-à-vis economic growth which is forecast in the range of 6%-12%.

Based on these assumptions, the following growth scenario for Jaffna District to 2020 is predicted in terms of the GDP growth rates generated in Jaffna, with a breakdown to the three segments. The upper part of Table5-1 shows Jaffna's estimated GDP figures for the past several years. They were worked out by manipulating the national account statistics of Northern Province, but the national account figures include only Jaffna and Vavuniya during the conflict, and even for Jaffna and Vavuniya, the low reliability of the gathered data is naturally imaginable under the extreme situation of the conflict. Thus, these data should be viewed with caution and be considered only as indicative. Only after 2009, the year the conflict ended, can a reasonable level of statistics reliability be assumed.

<sup>1</sup> Source: Economic and Social Statistics of Sri Lanka 2011, Central Bank

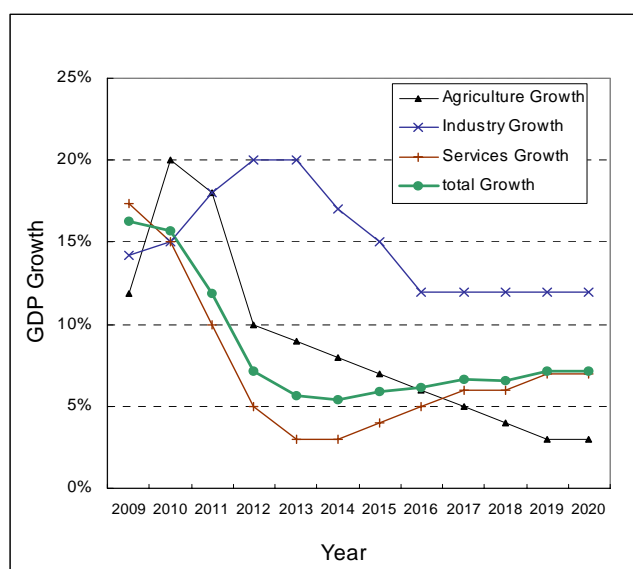
**Table 5- 1: Estimated Economic Growth Rates in Jaffna to 2020**

	2005	2006	2007	2008	2009	2010
Agriculture	0.5%	-39.7%	32.7%	29.9%	11.9%	20%
Industry	0.5%	0.5%	65.9%	3.9%	14.2%	15%
Services	0.5%	7.8%	10.6%	13.8%	17.4%	15%
PGDP	0.5%	-1.8%	16.9%	15.0%	16.3%	16%

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Agriculture	18%	10%	9%	8%	7%	6%	5%	4%	3%	3%
Industry	18%	20%	20%	17%	15%	12%	12%	12%	12%	12%
Services	10%	5%	3%	3%	4%	5%	6%	6%	7%	7%
District GDP	12%	7%	6%	5%	6%	6%	7%	7%	7%	7%

On the basis of the few assumptions discussed so far, the future economic growth rates of the three economic segments resemble the figures in the lower part of Table5-1. Figure 5-2 below is a chart made from this table. However, due to the reliability issue, the chart is constructed for data after 2009 only.



**Figure 5- 2: Estimated Economic Growth Rates in Jaffna to 2020**

From the estimated economic growth rates of, the GDP monetary values of the three segments and their sum total can be calculated as in Table5-2.

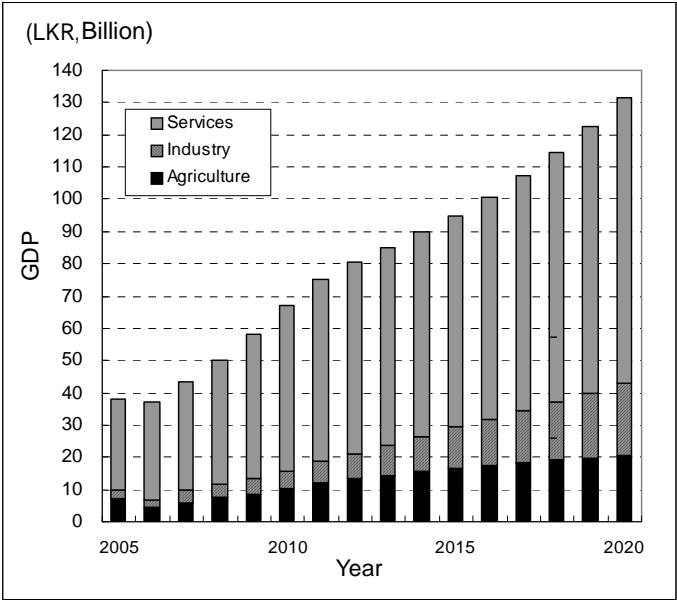
**Table 5- 2: Estimated District GDP of Jaffna to 2020 in Terms of Monetary Value (LKR billion)**

	2005	2006	2007	2008	2009	2010
Agriculture	7.28	4.39	5.83	7.57	8.47	10.17 (15.1%)
Industry	2.45	2.46	4.08	4.24	4.84	5.57 ( 8.3%)
Services	28.13	30.32	33.54	38.15	44.78	51.50 (76.6%)
District GDP	37.86	37.17	43.45	49.96	58.09	67.24

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Agriculture	12.00	13.20	14.38	15.53	16.62	17.62	18.50	19.24	19.82	20.41 (15.5%)
Industry	6.57	7.88	9.46	11.07	12.73	14.26	15.97	17.88	20.03	22.43 (17.1%)
Services	56.64	59.48	61.26	63.10	65.62	68.90	73.04	77.42	82.84	88.64 (67.4%)
District GDP	75.21	80.56	85.10	89.70	94.97	100.78	107.51	114.54	122.69	131.48

The chart below is drawn from Table 5- 2.



**Figure 5- 3: Estimated District GDP of Jaffna to 2020 in Terms of Monetary Value**

These figures show the expectation that the share of the secondary industries will surpass that of the primary industries before 2020 and that the combined shares of the primary and secondary industries will rise to more than 30% of the district GDP. In 2010, as Table 5- 2 shows, the shares of the three economic segments in Jaffna were 15.1% for the primary industries, 8.3% for the secondary industries, and 76.6% for the tertiary industries. In 2020, they would be 15.5%, 17.1%, and 67.4%, respectively. Although agriculture and fisheries would still remain as Jaffna’s traditional economic dynamos, a shift of gravity toward the secondary industries is a clear trend. As a result, the composition in 2020 would be somehow nearer to today’s national average. The GOSL aims to increment the share of the secondary industries from 29% in 2010 to 35% in 2015. Jaffna’s secondary industries are unlikely to be able to attain the same goal, even in 2020, but the increasingly important position of manufacturing would be seen in Jaffna as well.

The per capita GDP in Jaffna would double to reach around US\$2,000 around the year 2020. Incidentally, the value of US\$2,000 is equivalent to the national per capita GDP in 2009. The Team’s forecasting tends to be conservative to stay on the safe side, but if the manufacturing and transportation sectors are able to begin to flourish before 2015, the level of US\$2,000 would be attained earlier than predicted here.

How soon Jaffna will be able to catch up with the rest of the country in per capita GDP is an interesting question. If the economic growth of Jaffna goes the way we predict, the gap between the two would not be noticeably narrowed by 2020, provided the country as a whole also continues to enjoy economic growth of more than 8% per year through 2015, as the government predicts. This should be a subject raised not now but some years later. Yet, let us remember that our calculation is conservative, while the government economic goal is ambitious (though not unrealistic).

This development forecasting, however, in no way denies the important role of the primary industries, particularly in the period up to 2015, during which time the manufacturing sector would not be able to blossom with its full potential due to the poor infrastructure conditions in Jaffna and the lingering uncertainty felt by potential investors. These obstacles would be resolved sooner rather than later as confidence is built up with political reconciliation emerging on the horizon. Even if a stronger manufacturing sector rises in Jaffna, agriculture and fisheries would remain to be two powerful economic engines for many years to come.

In association with the important contribution of the primary industries, we should not underestimate the crucial role CBO will continue to play. The more value-added and commercialized agriculture and fisheries become, the more important it will be for producers to strike the balance between production activities in farm and pre- and post-production activities off farm. The latter include processing and marketing of crops and milk, financial service and input acquisition. Strengthened CBOs such as FO, FS and FCS can facilitate many pre- and post-production activities.

It is also expected that CBOs in production sectors as well as CBOs in social affairs will be able to help alleviate difficulties that socially vulnerable people in communities are facing with. They can reinforce mutual support among community residents including those particularly vulnerable.

**Challenges of the Individual Economic Sectors**

As another reference for the Grand Vision for Jaffna to 2020, it is useful to review what sort of challenges the individual economic sectors of the district will likely meet in the coming decade. Table 5-3 below summarizes what roles they will be given, and what issues they will have to address to fulfill their expected roles.

**Table 5-3: Challenges for the Individual Economic Sectors in Jaffna to 2020**

		Challenges up to 2015	Challenges from 2015 to 2020
The Primary Industries	Agriculture	<ol style="list-style-type: none"> <li>1. Lead the jump-starting of the local economy.</li> <li>2. Develop new domestic markets.</li> <li>3. Adopt advanced agriculture technologies.</li> <li>4. Develop farmers’ cooperatives.</li> </ol>	<ol style="list-style-type: none"> <li>1. Secure a soft landing on a stable growth track.</li> <li>2. Explore export and tourist markets.</li> <li>3. Adopt advanced agriculture technologies.</li> <li>4. Convert FO to genuine cooperative.</li> </ol>
	Fisheries	<ol style="list-style-type: none"> <li>1. Lead the jump-starting of the local economy.</li> <li>2. Construct fishing ports for offshore fisheries.</li> <li>3. Explore the potential of aquaculture development.</li> <li>4. Prepare fishing management by FCS.</li> </ol>	<ol style="list-style-type: none"> <li>1. Secure a soft landing on a stable growth track.</li> <li>2. Develop full-fledged offshore fisheries.</li> <li>3. Develop full-fledged way aquaculture.</li> <li>4. Begin fishing management by FSC.</li> </ol>
The Secondary Industries	Manufacturing	<ol style="list-style-type: none"> <li>1. Construct economic infrastructure.</li> <li>2. Prepare a special economic zone.</li> <li>3. Consolidate the training of technicians.</li> <li>4. Complete the Achuveli Industrial Estate.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lead economic development with FDI.</li> <li>2. Set up a special economic zone.</li> <li>3. Start the training of IT specialists.</li> <li>4. Attract private companies to the Achuveli Industrial Estate.</li> </ol>
	Construction	<ol style="list-style-type: none"> <li>1. Lead the jump-starting of the local economy.</li> <li>2. Train Jaffna’s construction workers.</li> <li>3. Provide credit to local construction</li> </ol>	<ol style="list-style-type: none"> <li>1. Secure a soft landing on a stable growth track.</li> <li>2. Train Northern Province construction workers.</li> </ol>

		Challenges up to 2015	Challenges from 2015 to 2020
		companies.	3. Promote joint ventures between local companies and large companies from Colombo.
	Utility Services	1. Construct a new power plant. 2. Complete a water supply and sanitation project. 3. Investigate the feasibility of a city gas scheme.	1. Ensure a steady supply of electricity. 2. Prepare small pipe water supply schemes in semi-rural areas. 3. Launch a city gas scheme.
The Tertiary Industries	Commerce and Finance	1. Develop the information and telecommunications infrastructure. 2. Train workers in commerce. 3. Prepare a special economic zone.	1. Lead economic development with FDI. 2. Set up a special economic zone, including an offshore financial market. 3. Consolidate the training of IT specialists. 4. Connect direct flights to India and Singapore.
	Tourism/ Restaurants	1. Prepare a master plan for tourism development. 2. Attract small to medium hotels. 3. Train workers in hotels and restaurants.	1. Develop an island resort to attract foreign hotels. 2. Attract foreign tourists, particularly Indians, with ferries and flights to India. 3. Attract Southeast Asian tourists with flights to Singapore.
	Transportation and Communication	1. Complete the rehabilitation of KKS Harbour and start ferry service to India. 2. Complete the rehabilitation of Palay Airport and prepare direct flights to India and Singapore. 3. Complete the rehabilitation of the railway. 4. Complete the rehabilitation of major roads in Jaffna. 5. Complete the rehabilitation of A9 and A32 highways. 6. Develop the information and telecommunications infrastructure.	1. Promote ferry and shipping services by the private sector. 2. Promote the management of Palay Airport by the private sector. 3. Promote civil aviation service. 4. Promote communication services by the private sector.
	Government Services	1. Balance the numbers of security officers and that of other public servants. 2. Fill vacancies at public offices. 3. Train civil servants for efficient performance.	1. Further balance security officers and other public servants if necessary. 2. Promote capacity development, competition, and liquidity among public servants. 3. Introduce the agency system to public offices.
All Sectors		1. Ensure an economic jump-start with the agriculture, fisheries, and construction sectors. 2. Complete basic economic infrastructure and social infrastructure. 3. Catch up with advanced technology. 4. Develop human resources. 5. Address IDP and returnee issues. 6. Resolve HSZ issues	1. Realize balanced economic development with growth points of manufacturing, commerce, and finance sectors. 2. Make Jaffna a transportation hub with South Asia and Southeast Asia. 3. Prepare business environment conducive to FDI. 4. Develop quality human resources in IT and finance. 5. Double per capital GDP between 2010 and 2020.

The table above clarifies a change in the roles the individual economic sectors are expected to perform; the agriculture, fisheries, and construction sectors would function as a lever to realize the economic jump-start, while more balanced economic development would be achieved after 2015, when the manufacturing, commerce, and finance sectors emerge as growth points. This scenario requires the rehabilitation of economic infrastructure to be completed before 2015, and also for the needs of human resource development to be addressed in every economic corner, in both low-tech and high-tech segments and in both private and public sectors.



Another key subject for Jaffna's economic development over the next decade is its functionality as a regional transportation hub with the rehabilitated KKS Harbour and the civil aviation service at Palay Airport. Their connection with south India, particularly with Tamil Nadu, and with Singapore, Malaysia, and the Andaman seaside of Thailand will be critically important for the long-term prosperity of the district.

These areas are all so-called emerging economies. Whether or not Jaffna can have direct linkages with them will determine the magnitude of its long-term economic growth. In other words, if Jaffna should fail to establish direct transportation connections with them, it might have to face the gradual marginalization of its status within Northern Province and the country. This is an issue we have to look at from the perspective of national economic interest, and the next section will discuss this.

### **Jaffna's Strategic Role**

Jaffna's economic future should be examined not just for the sake of Jaffna itself, but also for the national interest. Jaffna is located at a unique geographical and cultural spot in South Asia. What does this mean to the future of Sri Lanka? To answer this question, let us first review the characteristics of the Sri Lankan economy.

Sri Lanka used to be an agriculture-based economy exporting tea and other agricultural products to the world. Agriculture still supports the country today in a substantial way. However, the weight has been shifting to service sectors— in particular, tourism and sea transportation. For sea transportation, the country's comparative advantage lies in its location on the world map. Sri Lanka is strategically located in main East–West sea route. For instance, it is reported that over 100 ships bypass Sri Lanka daily during their voyages between Europe and the Far East. In addition, India's economy is now performing extremely well, and the south Asia region has shown considerable resilience, even during the global financial crisis of 2008–2009. As a result, South Asia has emerged as one of the world's fastest-growing regions.

Against this background, the Colombo Port has become a regional container hub because it has a comparative advantage over container ports in India; thus, 75% of cargo handled in the Colombo Port is trans-shipment cargo to and from India. The location advantage of the port has been the most important reason for its success. The Indian west coast is the main catchment area for the port from the early days. The east coast ports of India and the Bangladeshi port of Chittagong are connected to both Southeast Asian hubs and Colombo.

Today, a major expansion project is underway at the Colombo Port, which, once completed, will be a state-of-the-art maritime facility meeting all contemporary requirements in the shipping trade. Although development work at Galle is progressing as well, and two brand-new ports have been constructed in Hambantota and Oluvil, the strength of the Colombo Port is indisputable, with its advanced container-shipping hardware and transportation network. The Colombo Port is expected to reach its full capacity

of 4.5 million TEUs with the available port facilities in 2012. In 2020, its west and east container terminals will be developed to meet the forecasted demand of 10.6 million TEUs. As far as maritime transportation is concerned, GOSL's vision to make the country a "Naval, Aviation, Commercial, Energy, and Knowledge hub" will be substantiated, and the Colombo Port will play the central role in that vision.

However, the Colombo Port cannot afford to indulge in self-competence; as a matter of fact, it now faces a potential threat from the Indian port of Cochin, which is rapidly being developed and managed by a company that also manages the Dubai Port. India's container traffic has been projected to reach 15 million TEUs by 2020 from its present 6.5 million, and this has been the stimulus for India to develop its ports and reduce dependency on foreign hubs.

Unless the terminals at the Colombo Port continue to improve their productivity and offer more services for the same or less money, the port could lose its current position as the major hub port for the southern Indian sub-continent. This competition between the Colombo Port and the Cochin Port and other Indian ports will prepare the way for Jaffna to build its future by assisting the Colombo Port as a feeder port to deliver containers to ports in Tamil Nadu and the other western coast states of India.

Historically, a strategic theme for Indian ports has been the realization of direct connections between ports on the western coast and those on the eastern coast. This has been blocked by the less-than-10m draught in Palk Strait, lying between India and Sri Lanka, as well as by the huge capital requirement of constructing a railway connecting the two coastal regions. The surest way for the Colombo Port to survive through the competition with Cochin and other Indian ports is the provision of the most economical and fastest transshipment among Indian ports and between them and the world.

Once infrastructure for efficient land transportation between Colombo and Jaffna is available through A32 and/or by railway, and KKS Harbour become functional again, Jaffna could help strengthen the networking of Colombo, as containers entering the Colombo Port could be transported to Jaffna on land and from there transhipped to ports on the Indian eastern coast. The reverse flow would also be promoted. Of course, this would necessitate the construction of a medium-sized container yard in the KKS Harbour and integrated transportation management encompassing ferries, aviation, roads, and railway transportation. This can and should be done because the interest of global shippers has already shifted from the ports to the logistics chain as a whole. The revival of Jaffna as a regional transportation hub is not just a local interest but in the national interest of Sri Lanka.

Regional development based on this scenario envisions that ship handlers, ship repair centers, and hotels would be in close proximity to the terminal, while forwards, brokers, banks, and insurance or ticketing offices would operate in Jaffna's busiest streets. The locus of wholesale activity is expected to cluster in close proximity to the port. Local manufacturing would take advantage of Jaffna's transportation hub.

Agriculture and fishing would also find the most privileged marketing opportunities to access India and many tourists visiting Jaffna.

The examination of and some forecasting about the future of Jaffna's economic development supply important pieces of the mosaic required to envisage the Grand Vision of Jaffna to 2020. In conclusion, Jaffna District will realize a quick recovery, first based on an economic jump-start largely attributable to agriculture, fisheries, and construction, but gradually more focused on manufacturing, transportation, and other commercial service sectors in the later 2010s. This process would be a result partly of infrastructure development finishing in the mid 2010s and partly of more confidence felt by foreign investors investing in Jaffna. Last but not least, if adequate attention is paid to possible contribution of Jaffna, in parallel with Trincomalee, to bolstering the international competitiveness of the Colombo Port, Jaffna's development vision will be a matter of national interest as well. All these factors should be incorporated in envisioning the future development of Jaffna and in making specific development plans.

### **5.1.3 Analytical Framework<sup>2</sup> of the Sector Development Plans**

Before focusing on the core domain of the primary industries, let us touch upon the analytical framework of the sector development plans. Having observed the present status of the agriculture sector in Chapter 3, the Team reached the opinion that agriculture development plans should be worked out for each of the four different production categories.<sup>3</sup> For the same reason, the Team proposes three production categories for the fisheries sector.

One of the essential requirements in formulating the sector development plans is to describe explicitly the ideal status in terms of area, sector, policy, or any other aspects subject to planning. For each of the aforementioned categories of agriculture and fisheries, it is necessary to specify the ideal status, as opposed to the present status. This chapter, therefore, will next attempt to present development plans for agriculture and fisheries that include descriptions of the ideal status in a time framework. The sector plans divide the timeframe into the immediate future, short-term future, and mid-term future.

In this chapter and Chapter 9, we discuss the sector development plans called the Road Maps by placing required actions in the format of the "Framework of Development." In this format, the production categories correspond to the columns of the format.

In the meantime, the types of required actions (or interventions) correspond to the rows of the format. By sorting out required actions in the agriculture and fisheries sectors, we can identify some common types of actions. For instance, as discussed above, the macro-economic role that the two sectors must play in the immediate future will be to provide energy for the local economy so that the jump-start can happen. Efforts to acquire a new market for their products are another common norm between the two

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<sup>2</sup> Chapter 1 contains a figure of schematized analytical framework which this Section discusses.

<sup>3</sup> The categories will be explained in details in Section 5.2.4.

sectors. Examples include environmental conservation, the adoption of new technologies, the construction of infrastructure, institutional strengthening of producers' organizations, support to socially vulnerable people, and capacity development at the district and local authority levels.

On the other hand, there are some aspects the two sectors would not necessarily share. Examples are the development of new production areas, institutional strengthening at the province level, and FDI. While the fisheries sector needs rigorous efforts to venture into offshore, the agriculture sector in Jaffna hardly has a frontier space for geographical expansion. While agricultural extension services are carried out by the Ministry of Agriculture, which belongs to the provincial government, DOFA is positioned under the MFARD.

In the format of the Framework of Development, these types of required actions or developmental intervention are sorted out in rows. Particularly, actions required for enhancing production, and thus incomes, of farmers and fishermen are positioned in the upper rows in the format and those concerning institutional capacity are in the lower rows. Rows concerning institutional development are further divided into two groups: one concerning public service providers and the other for producers' organizations, typically CBOs.

Strategy and policy framework for supporting CBOs are discussed in the last section of this chapter. In particular, the discussion centers on effective support to CBOs with some focus on WRDS, which are commonly set up in many communities, urban and rural, in the district. However, their current functionality falls short of a satisfactory level. As a rare opportunity to reach out to the female population in the district, the Team suggests an appropriate policy for and approach to assisting CBOs, including WRDS.

## **5.2 The Agriculture Sector**

### **5.2.1 Macro-economic Consideration**

From the macro-economic point of view, the most significant policy implication is fragile bases of economic sectors other than agriculture and fisheries in Jaffna District. This fact renders it inevitable for the normalization and growth of the entire economy of Jaffna to rely on contributions from the agriculture and fisheries sectors in the next few years. The previous sections already discussed this point in details, so repetition must be avoided.

In addition, the development of other sectors in the district must be perceived in close association of agriculture and fisheries, with strong forward linkages to these sectors. For instance, in the current stage, the manufacturing industry should focus on agriculture-related sub-sectors such as rice milling and fruit processing. The same thing can be said for ice making plants and fishing boat docks for the fisheries sector.

## 5.2.2 Consideration for the Environment

Chapter 2 already discussed the feasibility study conducted by the ADB in 2006 which raised a set of recommendations for the water issues, which are particularly crucial environmental problems the administration of the district is facing with. Almost all of them are directly linked with the present agricultural practices, which is both cause and effect of district's water problem.

Apart from the ADB's recommendations, the Team considers that vegetation recovery is also necessary to pre-empt or mitigate future environmental problems. To recover vegetation coverage, certain areas should be reserved as forest area in order to maintain the forest ecosystem. Mangrove areas around lagoons should also be rehabilitated for water edge ecosystem. Moreover, the recovery of coconut and other palms will help mitigate soil erosion and groundwater depletion. These matters are very relevant to the development plan of the agriculture sector.

## 5.2.3 Objective Analysis

The Team conducted an objective analysis, which is attached herein (Figure 5- 4). The primary objective defined in this analysis was to realize sustainable, environmentally friendly agriculture in Jaffna District. Given the diversified nature of its agriculture, the Team took the four categories representing Jaffna's agriculture.<sup>4</sup> As mentioned above, two requirements—improvement in income and in institutional development—are adopted in analyzing the key aspects of all four categories.

The results of the objective analysis are summarized as follows.

For a rise in income, the following are key points:

- 1) The first measure is regarding the stable supply of inputs. Examples of such inputs are the supply of quality seed and seedlings, supply of offspring of improved breeds, and the study of germ plasm.
- 2) The second measure is the sustainable management of resources, and is often equivalent to environmental issues. As already discussed intensively in Chapters 1 and 3, and in the preceding Section of this chapter, the development of environmentally friendly agriculture is a crucial challenge in the district where the problems of salinity, overuse of chemicals, and water pollution are quite obvious. This issue demands those concerned with the local agriculture to take the following necessary actions:
  - a) the elimination of chemical residue in food, which requires a judicious use of agricultural chemicals and the monitoring of chemical usage;
  - b) a solution to groundwater pollution, which requires the judicious use of fertilizers, preventing contaminated water from entering into wells, controlling the excessive use of water, and monitoring water pollution; and

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<sup>4</sup> The next section will discuss the categories in details.

- c) the reduction of soil salinity, which requires a judicious use of fertilizers, preventing the entry of sea water into agriculture fields, controlling the excessive use of water, desalting lagoons, and the biological control and monitoring of soil salinity.
- 3) The third measure is an improvement in agricultural productivity. This measure includes increasing crop and livestock productivity, and assisting vulnerable citizens. Increasing crop productivity requires the reduction of post-harvest losses, pest control, timely operations, increasing irrigation capacity during the dry season, improving soil fertility, expanding agricultural lands, and improving information systems. Increasing livestock productivity includes the introduction of productive breeds, access to timely and adequate veterinary services, increasing the number of livestock within an environmentally tolerable level, introducing pasture crops and agricultural land, and improving information systems. Assistance to the vulnerable is an issue of equity; the equitable development of agriculture involves eradicating disparities, and includes addressing the challenges of regional food security and providing assistance to the vulnerable and returnees. The activities required to address these challenges include the provisioning of subsidies and technical assistance, the generation of cash income, the promotion of home gardening, the provisioning of cultivable land and financial support, and the promotion of social inclusion.
  - 4) The next measure is an improvement in marketing, which requires the development of profitable markets, promoting popular traditional crops, introducing new crops, and increasing value-added products.
  - 5) The last measure is an improvement in infrastructure. This measure includes an improvement in transportation and agricultural facilities.

Institutional development should be addressed along with the above five development challenges in order to achieve the vision of overall development, which will be discussed later. This includes strengthening public services such as agricultural extensions, livestock services, and research and education, and strengthening CBOs in the agriculture sector, such as FOs and FSs.

The objective analysis provides a useful insight in formulating a Road Map, which is discussed in more detail in Chapter 9.

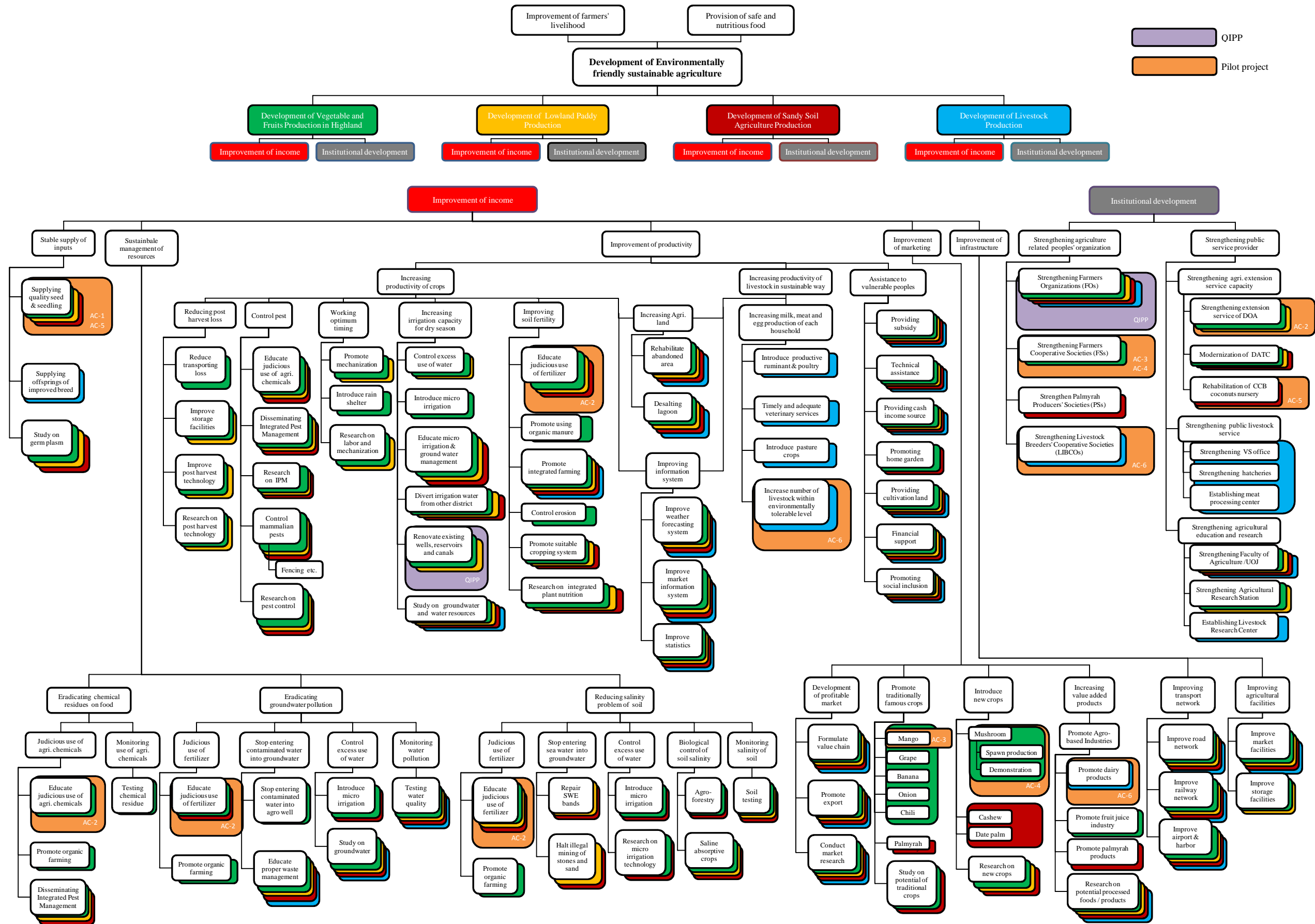


Figure 5- 4: Objective Analysis for Agriculture Development of Jaffna District

## 5.2.4 Potentialities and Available Resources in the Four Development Categories

In the Jaffna peninsula, the types of cultivated crops differ by area according to topography and soil type. Therefore, it is reasonable to consider a different set of strategies and plans according to the agro-geography. The Team classified Jaffna's agriculture into four categories (the first three of which are characterized by agro-geography): i) vegetable and fruit production in highland areas, ii) lowland paddy production, iii) sandy soil agriculture in outlying islands and coastal areas, and finally iv) livestock production, which is a separate agricultural practice, but is ubiquitously observed all across the district.

### (1) Vegetable and fruit production in highland areas

A variety of vegetables and fruits are grown in highland areas in fertile mineral-rich soil. Since the opening of the A9 highway, the production of these crops has been recovering rapidly to a pre-conflict level.

Red onions are a major cash crop cultivated in the Jaffna peninsula. In 1990, 57% of red onions grown in the entire country came from Jaffna. In 1989, the total production of red onions during Maha and Yala was recorded at 30,968 metric tons. During the conflict, production dropped sharply to 5,450 metric tons in 1995. After the conflict ended, production recovered significantly, and was recorded at 28,960 metric tons in 2009.<sup>5</sup> Jaffna farmers are highly concerned with onion cultivation at present. In particular, farmers in Kopay DS Division harvest their onions three times a year. With the opening of the A9 road, more red onions from Jaffna are now reaching the south. Farmers bring their harvests to the Dambulla Special Economic Center, a major wholesale food market in the country, to fetch better prices.

In addition to red onions, chilli peppers, Bombay onions, beetroots, and carrots are typical vegetables grown in the district. A variety of vegetables such as eggplants, beans, long beans, tomatoes, and capsicums (green peppers) are also grown in fertile soil.

Fruit crops cultivated in Jaffna include mangoes, bananas, passion fruit, papaw, oranges, grapes, pomegranates, jackfruit, belli fruit, wood apples, limes, and guavas.

Jaffna's mangos are traditionally popular in Sri Lanka. The most popular cultivars of mango trees are Karuththa Columban, Vellai Columban, Willard, and Ambalavi. Karuththa Columban is the preferred variety in the peninsula. While around 47,900 mango trees are grown in the peninsula, the productivity of mango trees has declined. More high-quality mangoes can be produced in the district through the pruning and proper maintenance of mango trees, which is essential to generate better yields from existing trees.

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<sup>5</sup> District Secretariat (2005)(2009). *Statistical information 2005 and 2009*, Jaffna District



Banana (*Musa Spp.*) is also a major fruit crop cultivated in Jaffna. According to the 2009 DOA report, the total banana production was 14,953 metric tons that year.<sup>6</sup> Ambul plantains of record size used to be grown in Jaffna by industrious farmers. Other commonly cultivated varieties are Kathali, Itharai, and Kappal. Jaffna farmers are very interested in expanding the cultivation of bananas, as well as adapting new cultivars, since they find better markets in the south.

Grapes are another potential fruit crop in Jaffna, the soil and climate of which are suitable for grape cultivation. Kopay, Vilaan, Urumpiraai, Punnalai-Kattuwan, and Illawalai are the main grape areas. Vineyards were destroyed during the conflict, and the cultivators could not sell their produce. According to the 2009 DOA report, over 380ha of grapes were cultivated in 1985, which was reduced to only 52ha in 2009.<sup>7</sup> With the opening of the A9 road, however, a prosperous era has dawned for grape farmers in Jaffna.

As a whole, few farmers in the district are interested in organic farming. However, in Chavakachcheri DS Division, farmers seem to be more interested in organic farming. Those who were using organic farming methods in past years have given up the practice due to an increase in pests and disease from neighboring fields and the resultant low crop productivity. Nowadays, the heavy usage of agrochemicals in farming has encouraged many in the government and NGOs to support organic agriculture.

## (2) Lowland paddy production

In many areas of the district, paddies are cultivated during the *Maha* season under rain-fed conditions. The main paddy production area is in the lowlands of Chavakachcheri and Chankanai, Sandilipay DS Divisions. In 2009/2010 over 10,500ha<sup>8</sup> of paddies were cultivated, but 13,102ha of land in the Jaffna registry<sup>9</sup> is currently recorded as paddy fields. This means that around 2,600ha of paddy land went uncultivated in 2009.

As shown in Table 5-4, paddy farmers have been suffering a price reduction due to cheaper rice entering from the south since the opening of the A9 road. Although the government supports paddy farmers with subsidized fertilizers, the present small-scale rain-fed cultivation is a disadvantage, and its market competitiveness is weak compared to other rice-growing areas where large-scale irrigated cultivation is practiced. However, paddy cultivation should be maintained from a food security point of view, as rice is a staple crop in the region. Further effort should be made to raise productivity and reduce production costs.

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<sup>6</sup> DOA (2010). Annual administration report, 2009, Jaffna district

<sup>7</sup> DOA (2010). Annual administration report, 2009, Jaffna district

<sup>8</sup> District Planning Secretariat of District Secretariat (2009), Integrated Agricultural Development & Extension Programme 2009 - 2010 Maha and 2010 Yala, Jaffna district

<sup>9</sup> Ibid.

**Table 5- 4: Price reduction of paddy after opening A9 road<sup>10</sup>**

Type of Rice	Farm Gate (LKR / kg)	Whole sale (LKR / kg)	Retail (LKR / kg)
<b>July 2011</b>			
Jaffna (Traditional)	n/a	70	75
Jaffna (Improved)	33	55	60
Southern Rice in Jaffna	n/a	65	70
<b>2007 (Following Closure of A9)</b>			
Jaffna (Traditional)	n/a	105	110
Jaffna (Improved)	64	75	80

Around 40% of paddy produced in Jaffna Peninsula is a traditional variety. Productivity of the traditional variety is low compare to improved varieties. However there is a stable market for the traditional one in the district since local people favor it.

(3) Sandy soil agriculture in the outlying islands and coastal areas

The palm family favors the sandy soil on the islands and the sand bars found in the district. Palm crops provide a good source of income for local people.

Coconut trees can be found scattered all across the Jaffna peninsula. More trees are grown along the coastal areas where sandy soil is prevalent. The amount of land used for cultivating coconut was 12,480ha as of 2002. However, since coconut trees in as much as 6,125ha were damaged during the conflict, the amount of viable land for coconut production is only 6,355ha. CCB has a coconut nursery over 2.8ha in Atchchuvely, Kopay DS Division, with a capacity of 150,000 seed nuts. This nursery can provide genetically superior plants, and is thus helping to increase coconut production and rehabilitate low-yield coconut plantations. Annual demand for coconuts in the district is estimated at around 78 million nuts. At present, only 20–30% of this demand is being met locally.<sup>11</sup>

Palmyrah (“Tree of life,” *Katpahatharu* in Tamil) is another important multipurpose tree that grows extensively in the district. This tree offers various kinds of products and has the potential to uplift the income of deprived locals. Its potential products include Pulukkodiyal dried tuber, Pulukkodiyal flour, treacle, fruit pulp, jam, jaggery, soft drinks, and Pannaattu dried fruit pulp. Palmyrah trees are found in abundance in the island areas. They grow wild and are easy to cultivate, requiring little labour. Planting the nuts and protecting them from cattle until they grow tall enough is all that is required. According to the Palmyrah Development Board (PDB) in 2009, out of the 11 million palmyrah trees in the North and East, 3.5 million are in Jaffna. During 30 years of conflict, however, 2.5 million trees were destroyed in these provinces to build bunkers.

Cashews and date palms are also potential crops suitable for sandy soil. Cashew trees were planted experimentally in Maruthankerny DS Division around 20 years ago. They have been growing well, but

<sup>10</sup> Source: interview with DOA officials (August 2011)

<sup>11</sup> CCB (2010). *Development of the coconut industry in the Northern Region, Jaffna district*

they have been left wild and are not considered a cash crop. The date palm has yet to be introduced in Jaffna.

#### (4) Livestock production

Prior to the conflict, Jaffna District had 10% of the nation's cattle population, 20% of the goat population, 60% of the sheep population, and 7% of the poultry population. During the conflict period, 37% of cattle, 45% of goats, and 90% of poultry was lost.<sup>12</sup> The livestock population of cattle, goats, and poultry were recorded as 113,562, 96,193, and 578,522 respectively, in 1984, and 97,168, 51,942, and 296,460 in 2009.<sup>13</sup> This statistic implies that the recovery of the livestock sector to a pre-conflict production level needs a few more years.

The district has unused land that can be utilized for the livestock sector. At present, this has yet to be realized, partly because a considerable amount of area in the district is littered with landmines. The cleared land can then be used for the development of dairy and other livestock systems.

Although unused land remains, the total available land for pasture in the Jaffna peninsula is limited. On the other hand, the intensive rearing of livestock should be carefully practiced because the groundwater of the Jaffna peninsula is easily contaminated by livestock waste. Hence, the number of livestock should be kept within an environmentally tolerable level.

The production of livestock should be increased through an improvement in the productivity of all livestock species. In the case of cattle and goats, this can be achieved through cross-breeding programmes using artificial insemination, and for poultry through the introduction of improved commercial breeds. An increased production of livestock can also be achieved through an improvement in feed, including the introduction of fodder crops.

The marketing of milk can also be expanded by establishing more LIBCO milk sale outlets. Thus far, 12 such milk outlets are functioning in the district<sup>14</sup>. The presence of LIBCOs and more milk collection outlets will encourage the rearing of livestock.

Livestock is considered a means to bring a steady income to farmers throughout the year. Moreover, climate change is expected to have less effect on the livestock sector than the crop sector.

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<sup>12</sup> FAO, 2007, Livelihood Situation and Mitigation Measures Jaffna District

<sup>13</sup> DAPH, 2010, Livestock Statistics

<sup>14</sup> Ibid

## 5.2.5 Basic Development Framework

### (1) Overall Vision

Throughout the Jaffna peninsula, reconstruction, environmental concerns, and competitiveness are the major challenges in agricultural development. Therefore, the Team proposes the following overall development vision for the agriculture sector:

The overall vision is to recover to a pre-conflict production level and develop sustainable agriculture while conserving the environment.

### (2) Four Development Categories

For the four different categories discussed above, the Team also proposes formulating the development plan in three separate time frames, immediate- (2011–2012), short- (2013–2016), and mid-term (2017–2020) periods, as well as clarifying the ideal status as a long-term goal for each category. Having examined the present status, as well as the potential and available resources in Jaffna, and having undertaken the objective analysis, the Team proposes following the development strategies, targets, and goals for each development category.

#### 1) Vegetable and fruit production in the highland areas

Red onions, mangos, bananas, and grapes are traditional produce grown in Jaffna, and are highly consumed in Sri Lanka. Ensuring the development of these traditional Jaffna specialties, while at the same time developing new local specialties, is the first priority for this category. Enhancing the competitiveness of these crops through cost reduction and value addition is the second step. Moreover, the marketing of these crops to regions outside Jaffna should also be promoted. In essence, the Team recommends a strategy, the targeting of different stages, and goals in this category, as shown in Table 5-5 below.

**Table 5- 5: Strategy, Targets, and Goals of Vegetable and Fruit Production in Highland Areas**

Strategy	Recovering the production of local specialties such as mangos, onions, and bananas to a pre-conflict level and expanding the offshore market			
Term	Immediate (2011–2012)	Short-term (2013–2016)	Mid-term (2017–2020)	Long-term (Goal)
Target	<ol style="list-style-type: none"> <li>1. Production of red onions, chilli peppers, vegetables, bananas, mangos grapes, papayas, jacks, pomegranates, moringas, limes, and oranges will be recovered to a pre-conflict level.</li> <li>2. The level of groundwater pollution will be reduced to under the WHO limit, and the applications of irrigating water will be reduced.*</li> <li>3. IDPs and returnees will be able to practice subsistence food cultivation and generate income.</li> <li>4. New crops such as dragon fruit, dates and varieties of grapes, bananas, and mangos will be introduced.</li> <li>5. Farmers’ cooperative societies will be strengthened.</li> </ol>	<ol style="list-style-type: none"> <li>1. More than one new product will be disseminated.</li> <li>2. The livelihood of IDPs and WHFs in farming villages will be improved to the level of average farmers.</li> <li>3. Total production of fruit and vegetables will be increased by 20% from the level in 2012</li> <li>4. Ground water pollution will be kept under the WHO limit.</li> <li>5. Chemical residue on food will be reduced to a minimum level.</li> <li>6. The practice of flood irrigation will be reduced to ¼ of the cultivated area, and irrigation water will be made available throughout the year.**</li> <li>7. The livelihood of IDPs and WHFs in farming villages will be improved to the level of average farmers.</li> <li>8. Vegetable and fruit processing will be introduced.</li> </ol>	<ol style="list-style-type: none"> <li>1. The export market will be developed.</li> <li>2. The total production of processed food from vegetables and fruit will be increased by 40% from the level in 2016.</li> <li>3. An increased number of quality local specialties will be marketed nationally.</li> </ol>	<ol style="list-style-type: none"> <li>1. The increased number of quality local specialties will be marketed nationally and internationally.</li> <li>2. A significant contribution to the district economy will be made.</li> </ol>

\* Groundwater is used for drinking water as well as for agricultural purposes, and therefore the WHO’s recommendation for drinking water should be applied as an indicator of groundwater pollution.

\*\* The area of flood irrigation was taken to measure the reduction of groundwater exploitation, since the total volume of irrigated water is not measurable.

Based on the targets in the different stages and goals in this category, the Team projected the achievable changes in terms of various indicators for the development of vegetable and fruit production, as shown in Table 5-6 below. The projection was made after consultation with the related agencies.

The production of traditionally popular produce such as red onions, mangoes, bananas, and grapes were projected to increase by 1.3-4 times the present level in 2020, while the quality of ground water was projected to be maintained under the WHO limit. The practice of flood irrigation was projected to be reduced to a quarter of the cultivated area.

**Table 5- 6: Indicators for the Development of Vegetable and Fruit Production in Highland Areas**

Time span		Figure for pre-conflict period	Immediate target (2011–2012)	Short-term target (2013–2016)	Mid-term target (2017–2020)	Long-term goal (2021– )
Issues and indicators						
Improvement of income						
Stable supply of inputs	Supply of vegetable seed from SEEDCO (Mt) 0.5 (2010)	n/a	0.75	1.0	1.5	1.5
Sustainable management of resources	Level of ground water pollution	n/a	Under WHO limit	Under WHO limit	Under WHO limit	Under WHO limit
	Practice of flood irrigation	n/a		Reduce the practice of flood irrigation to 1/4 of the cultivated area	Reduce the practice of flood irrigation to 1/4 of the cultivated area	Reduce the practice of flood irrigation to 1/4 of the cultivated area
Improvement in productivity	Red onions (Mt) 28,960 (2009)	30,968 (1989)	40,000	48,000 (up 20% )	50,000 (up 5%)	50,000
	Bananas (Mt) 18,503(2008)	n/a	20,000	24,000 (up 20%)	24,000	24,000
	Mangos (Mt) 2,375(2008)	n/a	3,000	4,000 (up 20%)	5,000 (up 10%)	5,000
	Grapes (Mt) 921(2008)	n/a	2,000	3,000	4,000	4000
Improvement in marketing	Sales outlets of FSs (Nos)	n/a	1	2	2	2
Improvement in infrastructure	Cold Storage (Nos)	n/a	1	3	10	15
Institutional development						
Strengthening agriculture related peoples' organization	Sales outlets of FSs (Nos)	n/a	1	2	2	2
Strengthening of public service providers	Training opportunities for extension officers (days/year/person)	n/a	20	20	20	20

2) Lowland paddy production

There is some more room to increase the amount of paddy cultivated areas to near pre-conflict levels. Although the government supports paddy farmers with subsidized fertilizers, small-scale rain-fed cultivation of Jaffna's paddy production is an obvious disadvantage, and its market competitiveness is weak compared to other rice-growing areas where large-scale irrigated cultivation is practiced. However, the paddy is the staple crop and cultivation should be maintained from a food security perspective. Further effort should be rendered to raise productivity and reduce production costs. The Team recommends the strategy, targeting of different stages, and goals shown in Table 5-7.

**Table 5- 7: Strategy, Targets, and Goals of Lowland Paddy Production**

Strategy	Recovering paddy fields to a pre-conflict level and improving the rate of self-sufficiency in the district			
Term	Immediate (2011–2012)	Short-term (2013–2016)	Mid-term (2017–2020)	Long-term (Goal)
Target	1. The extent of paddy cultivation will be recovered to a pre-conflict level. 2. The supply of locally produced quality seed will be increased to 30% of the local demand. 3. IDPs and returnees will be able to practice subsistence food cultivation.	1. The supply of locally produced quality seed will be increased to 40% of the local demand. 2. Post harvest loss will be reduced, and the yield will be increased by 10% of the average yield recorded in 2009–2013. 3. The livelihood of IDPs and WHFs in farming villages will be improved up to the average level of farmers.	1. The supply of locally produced quality seed will be increased to 50% of the local demand. 2. Post harvest loss will be reduced and the yield will be increased by 20% of the average yield recorded in 2009–2013.	1. The efficiency and profitability of paddy cultivation will be improved. 2. A 40% self-sufficiency of rice in the district will be achieved. (Current Production: 25,000 Mt ; estimated local consumption: 85,000 Mt)

Based on the targets in the different stages and goals in this category, the Team projected the achievable changes in terms of various indicators for the development of lowland paddy production as shown in Table 5-8 below. The projection was made after consultation with the related agencies.

Paddy production was projected to be increased by 30% of the present figure during the next decade.

**Table 5- 8: Indicators for the Development of Lowland Paddy Production**

Issues and Indicators		Time span	Figure for pre-conflict period	Immediate target (2011–2012)	Short-term target (2013–2016)	Mid-term target (2017–2020)	Long term goal (2021– )
		<b>Improvement in income</b>					
Stable supply of inputs	Seed supply from SEEDCO (Mt)		n/a	100	100	100	100
Sustainable management of resources	No appropriate indicator		-	-	-	-	-
Improvement in productivity	Sown extent (ha)	10,383 (1988)		11,500	13,000	13,000	13,000
	Production (Mt)	25,210 (2009/2010)	n/a	30,000	33,000	33,000	33,000
Improvement in marketing	No appropriate indicator		-	-	-	-	-
Improvement in infrastructure	Renovated tanks and canals (Nos)	32 (2010)	n/a	50/year	50/year	50/year	50/year
<b>Institutional development</b>							
Strengthening of agriculture related peoples' organization	Innovative FOs to improve paddy production (Nos)		n/a	15/year	15/year	15/year	15/year
Strengthening of public service providers	Training opportunities for extension officers (days/year/person)		n/a	5	5	5	5

3) Sandy soil agriculture in outlying islands and coastal areas

Coconut and palmyrah are suitable crops to grow in sandy soil in islands and sand bars of the district. However, these crops were heavily damaged during the conflict and have yet to be recovered. The recovery of these crops can bring immediate and ensured income to local residents. They also have the potential of value-added sale. In addition, there appears to be the potential for developing other crops such as cashew nuts and date palms in sandy areas. Based on these observations, the Team recommends the strategy, targeting of different stages, and goals shown in Table 5-9

**Table 5- 9: Strategy, Targets, and Goals of Sandy Soil Agriculture**

Strategy	Recovering suitable crops for sandy soil to pre-conflict levels, achieving self-sufficiency, and promoting value-added sales			
Term	Immediate (2011–2012)	Short-term (2013–2016)	Mid-term (2017–2020)	Long-term (Goal)
Target	<ol style="list-style-type: none"> <li>1. Local coconut production will be increased up to 30% of the local demand.</li> <li>2. IDPs and returnees will be able to plant additional coconut and palmyrah trees for future income.</li> <li>3. Coconut/ Palmyrah/Cashew trees based on intercropping will be increased.</li> <li>4. Palm Development Cooperative Societies will be strengthened.</li> </ol>	<ol style="list-style-type: none"> <li>1. Local coconut production will be increased up to 60% of local demand.</li> <li>2. The livelihood of IDPs and WHFs in farming villages of this category will be improved up to the level of average farmers.</li> <li>3. Coconut/Palmyrah/ Cashew-based intercropping will be increased.</li> <li>4. Palm Development Cooperative Societies will be strengthened.</li> </ol>	<ol style="list-style-type: none"> <li>1. Local coconut production will be increased up to 100% of local demand.</li> <li>2. Cashew nut and date palm trees will be introduced as commercial crops.</li> <li>3. Sale of palmyrah products will be increased up to 100% from the sales in 2013.</li> </ol>	<ol style="list-style-type: none"> <li>1. Local demand for coconut and palmyrah will be satisfied 100% by local produce.</li> <li>2. Value-added products of coconut and palmyrah will be marketed nationally and internationally.</li> <li>3. New crops will be introduced and become popular.</li> <li>4. A green belt will be established with palmyrah, coconut, Cashew, and neem trees, among others.</li> <li>5. Palmyrah exploitation and utilization will reach 70%</li> </ol>

Based on the targets in the different stages and goals in this category, the Team projected achievable changes in terms of various indicators for the development of sandy soil agriculture as shown in Table 5-10 below. The projection was made after consultation with the related agencies.

The extent of coconut cultivation was projected to be increased three-times the present extent during the next decade. Palmyrah product utilization was foreseen to be increased from 20% in 2010 to 60% in 2020.



**Table 5- 10: Indicators for the Development of Sandy Soil Agriculture**

Issues and indicators		Time span	Figure of pre-conflict period	Immediate target (2011–2012)	Short-term target (2013–2016)	Mid-term target (2017–2020)	Long-term goal (2021– )
<b>Improvement in income</b>							
Stable supply of inputs	Production of coconut seedling of improved variety (seedlings/year)	n/a	200,000	300,000	300,000	300,000	300,000
	Production of palmyrah seedlings: (Nos) 10,000 (2011)	n/a	35,000	50,000	75,000	100,000	100,000
	Production of palmyrah Seeds (Nos)	n/a	500,000	500,000	500,000	500,000	500,000
Sustainable management of resources	No appropriate indicator	-	-	-	-	-	-
Improvement in productivity	Extent of coconut (ha) 2,542 (2009)	4,992 (2002)	4,000	6,000	8,000	10,000	10,000
	Palmyrah product utilization (%) 20% (2010)	n/a	40%	50%	60%	70%	70%
	Functioning palmyrah model farms (Nos) 2 (2011)	n/a	5	10	15	15	15
	Extent of new crops (ha)	n/a	5	20	80	More than 80	More than 80
Improvement in marketing	Outlet for palmyrah product (Nos) 6 (2011)	n/a	8	10	10	10	10
Improvement in infrastructure	Improved facilities	n/a	Palmyrah Product Complex	Palmyrah Research Institute	-	-	-
<b>Institutional development</b>							
Strengthening of agriculture related peoples' organization	Number of coconut societies at the village level	n/a	60	90	425	425	425
	Sales of palm development cooperative societies (increment %)	n/a	Increase 10%	Increase 20%	Increase 30%	Increase 40%	Increase 40%
Strengthening of public service providers	Training opportunities for extension officers (days/year/person)	n/a	10	10	10	10	10

#### 4) Livestock production

As an integral part of farming in Jaffna, the raising of livestock is important for food, manure, and draught power. Livestock can also be used as a buffer in the case of crop failure, and as assets for social and cultural functions. The number of livestock should be further increased to reach to pre-conflict levels. However, this increase should be within an environmentally tolerable level. Productivity should be improved by replacing livestock with improved breeds and practicing improved rearing technologies. Processing and value addition is another important strategy to improve profitability. The Team recommends the strategy, targeting of different stages, and goals shown in Table 5-11.

**Table 5- 11: Strategy, Targets, and Goals of Livestock Production**

Strategy	Consider livestock as an aspect of integrated farming. Recover the number of livestock to a pre-conflict level and improve the rate of self-sufficiency in the district by introducing suitable breeds and promoting value-added sale.			
Term	Immediate (2011–2012)	Short-term (2013–2016)	Mid-term (2017–2020)	Long-term (Goal)
Target	<ol style="list-style-type: none"> <li>1. The number of livestock will recover to a pre-conflict level.</li> <li>2. IDPs and returnees will be able to practice subsistence food production.</li> <li>3. Adequate supply of high bred materials will be achieved.</li> <li>4. Income generation through livestock will be achieved for vulnerable families.</li> <li>5. Financial support for vulnerable people will be practiced.</li> <li>6. Recycling of livestock and slaughter house waste will be achieved</li> <li>7. CBOs will be strengthened</li> </ol>	<ol style="list-style-type: none"> <li>1. Milk, meat, and eggs will be supplied 100% locally.</li> <li>2. Improved breed of cattle will replace 30% of the total number, and thus milk production will increase up to 3 liters per head on average.</li> <li>3. The livelihood of IDPs and WHFs in farming villages will be improved up to the level of average farmers.</li> <li>4. Financial support to vulnerable people will be practiced.</li> <li>5. The capacity of stakeholders will be improved.</li> <li>6. Marketing strategies will be developed</li> </ol>	<ol style="list-style-type: none"> <li>1. An improved breed of cattle will replace 50% of the total number, and thus milk production will increase up to 4 liters per head on average.</li> <li>2. Processed milk products will be diversified, and the total consumption of local milk will be increased up to 50% from the level in 2013</li> <li>3. Integrated farming will be practiced.</li> <li>4. Value addition of livestock products will be achieved</li> <li>5. Supply of adequate roughage will be provided</li> </ol>	<ol style="list-style-type: none"> <li>1. Local demand for livestock products will be satisfied 100% with local produce.</li> <li>2. Value-added livestock products will be marketed nationally and internationally.</li> <li>3. Livestock rearing will be maintained as an aspect of integrated farming</li> </ol>

Based on the target for the different stages and goals in this category, the Team projected the achievable changes based on various indicators for the development of livestock production, as shown in Table 5-12 below. The projection was made after consultation with the related agencies.

The number of livestock was projected to be slightly increased during next decade, while the production of milk and mutton was projected to be increased by 50%.

**Table 5- 12: Indicators for the Development of Livestock Production**

Time span		Figure of pre-conflict period	Immediate target (2011–2012)	Short-term target (2013–2016)	Mid-term target (2017–2020)	Long-term goal (2021– )
Improvement of income						
Stable supply of inputs	Cattle AIns (Nos) 7,871 (2009)	n/a	9,000	10,000	11,000	11,000
	Chicks (Nos) 72,210 (2009)	n/a	80,000	100,000	100,000	100,000
Sustainable management of resources	Nitrate nitrogen level of groundwater	n/a	Under WHO's limit	Under WHO's limit	Under WHO's limit	Under WHO's limit
Improvement of productivity	Number of cattle 96,668 (2009)	113,562 (1984)	100,000	110,000	120,000	120,000
	Number of poultry 296,460 (2009)	578,522 (1984)	400,000	500,000	500,000	500,000
	Number of goats 51,942 (2009)	96,193 (1984)	70,000	100,000	100,000	100,000
	Milk (litters) 10,897,075 (2009)	n/a	10,000,000	12,000,000	14,000,000	15,000,000
	Average milk production per head of cow (dairy female)	n/a	3 litters	4 litters	5 litters	6 litters
	Mutton (kg) 112,596(2010)	n/a	123,000	135,000	150,000	150,000
	Eggs (Nos) 40,831,820 (2009)	n/a	41,600,000	42,800,000	44,000,000	50,000,000
Improvement of marketing	Improvement of Sales outlets: (Nos) 50 out of 54 functioning (2010)	n/a	10 outlets/year	10 outlets/year	10 outlets/year	-
Improvement of infrastructure	Organized livestock market (Nos)	n/a	3	5	10	15
Institutional development						
Strengthening of agriculture related peoples' organization	Strengthened LIBCO (Ex. Processing centre operated by LIBCO) (Nos)	n/a	5	8	11	11
Strengthening of public service providers	<u>Feed storages at VS office (Nos)</u>		4	10	15	17

### 5.3 The Fisheries Sector

#### 5.3.1 Macro-economic Consideration

Since this matter has already been discussed in 5.2.1, including the fisheries sector, it may not be necessary to repeat the same argument here.

### 5.3.2 Consideration for the Environment

Pollution around dumping grounds is one of the environmental issues discussed in Chapter 2. Dumping grounds are set up near shorelines, so contaminated materials could possibly seep into the Jaffna Lagoon. Currently, there appear to be no serious environmental issues in connection with fisheries except the possible overexploitation of fish resources by the fisheries sector. However, the expected population increase, in combination with increased economic activities in the future, is likely to increase negative environmental effects from the dumping grounds to the sea. The absence of an active manufacturing sector in the district helps to preserve the clean sea, but the district will have to maintain a good ocean environment in the near future in order to have sustainable fisheries.

### 5.3.3 Objective Analysis

The Team conducted an objective analysis for the fisheries sector, and the results are given below (Figure 5- 5: Objective Analysis for Fisheries Development of Jaffna District). The ultimate objective of the fisheries sector is to secure sustainable fisheries development in Jaffna District by achieving three key measures: the restoration of fisheries infrastructure, the formulation of a co-management system for fishery resources, and balanced fishery resource exploitation. Improving fisheries training and education is also necessary to attain this objective.

The rehabilitation of fisheries infrastructure includes fish production facilities such as jetties, fish landing sites, harbours, fish auction halls, fish distribution facilities (producer markets, access roads, ice storage facilities, etc.), and infrastructure for fish consumption (fish consumer markets, other necessary facilities for cold chains, etc.). PDP Jaffna rehabilitated two jetties in Kakkativu and Navanthurai under QIPP and constructed fish auction halls and other necessary facilities for five FCSes to support related development.

The establishment of a co-management system for fishery resources<sup>15</sup> requires community-based fishery management and scientific fishery management. The team recommends first initiating community-based fishery management by making a record of currently practiced fishery regulations, self-control and control initiatives, and traditional customs. The next step is their integration at the district level. This process can be facilitated through the implementation of a pilot project, which helped build capacity at the FCS Unions' Federation. For scientific fishery management, the scientific assessment of fishery resources, such as fisheries' stocks in coastal fishing grounds, is essential. If both community-based fishery management and scientific fishery management are adequately implemented, the co-management system can be further reinforced.

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<sup>15</sup> The co-management system for fishery resources manages fishery resources by integrating community-based fishery management and top-down type scientific resource management such as the total allowable catch (TAC) system.

In Jaffna District, it is very likely that balanced fishery exploitation requires the diversification of fishing efforts away from coastal fishing grounds to offshore fishing grounds through the introduction of multi-day fishing boats and, additionally, the development of new technologies, typically for aquaculture of several potential species. Post-harvest improvements in fish processing and cold chains are also useful for balanced fishery exploitation. In this regard, the Team implemented two aquaculture pilot projects and a pre-feasibility study on the construction of a fishing harbour for offshore fisheries development.

The Team also recommended a series of actions needed to carry out development policies about several of the key issues mentioned in Table 5- 13 during the fourth District Forum with GA. The presentation panels shown in the forum are attached in Appendix 5-1. These key issues and the corresponding necessary actions are formulated on the basis of the objective analysis.

Similar to the practice for the agriculture sector, after reviewing the results of the objective analysis, the Team believes that the strategy framework for the fisheries sector needs to be restructured to highlight the most important possibilities for further development. The Team has agreed that more attention ought to be paid to the possibility of offshore fisheries development and to the formerly neglected possibility for aquaculture development. This consensus led to the three development categories. The following sections give details on the requirements for each of the three categories.

**Table 5- 13: Key Issues for the Fisheries Sector Development in Jaffna District**

<b>Key Issues</b>	<b>Development Policies</b>	<b>Action Plans</b>
1. Rehabilitation of fisheries infrastructure	Necessary infrastructure for fish production, distribution, and consumption shall be rehabilitated	1) Urgent rehabilitation of several jetties and improvement of fishing harbours
		2) Rehabilitation and construction of auction halls and producers markets.
		3) Renovation of consumers' fish markets
2. Well-balanced exploitation of fisheries resources	Off-shore fishery development is to be carried out.	1) Promoting multi-day boat builders in the district
		2) Assisting FCS in order that fishermen can use multi-day boats.
		3) Conducting a feasibility study on building fishing harbours for off-shore fisheries.
	Aquaculture development is to be carried out.	1) As initial steps, fattening of sea cucumbers, and then setting-up hatcheries in the future.
		2) Promoting seaweed ( <i>Euchuma sp.</i> ) culture to provide employment opportunities for women.
		3) Establishing cold chains from fish catch to the consumer market.
3. Institutional development	Participatory fisheries management is to be improved.	1) Preparing an inventory of participatory fishery management systems and traditional customs in the district.
		2) Holding workshops at FCS to discuss necessity of self-control and regulations for sustainable coastal fishery
		3) Summarizing and formulating coastal fishery regulations by FCS Union Federation of the district.
	Scientific fishery statistics are to be improved.	1) Providing weight scales to more fish auction centers.
		2) Introducing fish measuring system to obtain accurate initial figures for the establishment of scientific fishery statistics.
	Fishermen's cooperative societies are to be strengthened.	1) Implementing capacity building of FCSes staff through workshops and training
2) Implementing technical, financial, and institutional support for FCS.		

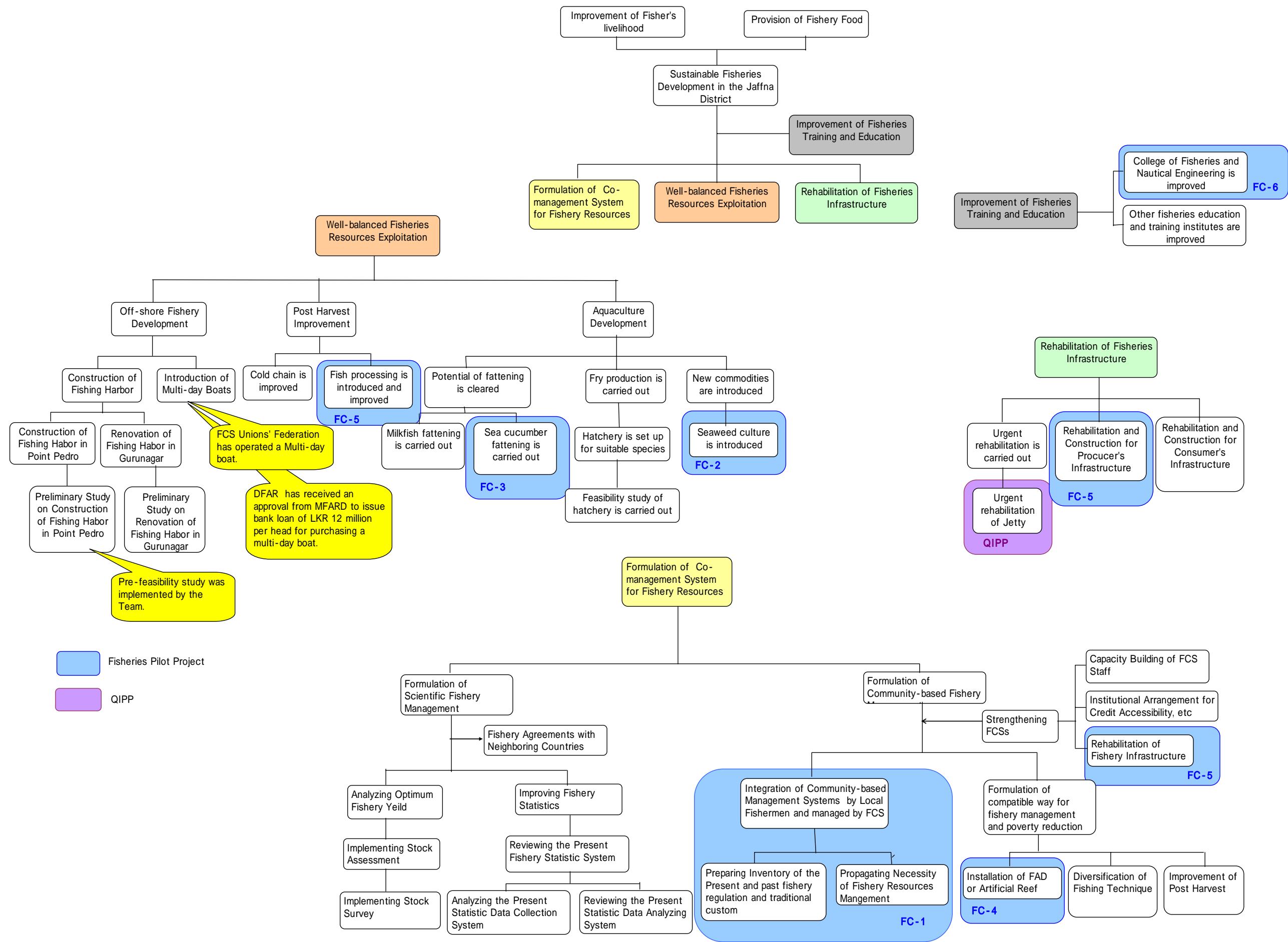


Figure 5- 5: Objective Analysis for Fisheries Development of Jaffna District

### 5.3.4 Possibilities and Available Resources in the Three Development Categories

The fact that the fishing population needs to earn livelihoods has intensified the exploitation of Jaffna's coastal resources. Consequently, we need to address challenges in the following three categories: the establishment of a sustainable system for coastal fisheries, offshore fisheries development, and aquaculture development.

The establishment of a sustainable system for coastal fisheries will require the formulation of a co-management system by implementing community-based fishery management based on enhanced capacity of the present FCSes as well as scientific fishery management. These matters were discussed in Section 5.3.3 above. Both offshore fishery development and aquaculture development are needed to balance and sustain exploitation of fisheries resources (see Key Issue 2 in Table 5- 13). All three development categories require the rehabilitation or improvement of fisheries infrastructure (see Key Issue 1 in Table 5- 13).

The following section describes the possible and available resources relevant to the three development categories:

#### (1) Establishment of a Sustainable System for Coastal Fisheries

At present, most fishing activities are confined to the coastal fisheries subsector in the district. Government agencies and donors have supplied boats and fishing nets to people who have suffered from the conflict and the tsunami, and fishermen have rushed to earn their livelihoods by fishing with these new means of production. Their motivation has been further increased by the cancellation of various restrictions on fishing operations.

The conflict and the tsunami have greatly damaged the fishery infrastructure. The damage extends to jetties, fish auction halls, and fish markets. It is important for GOSL and donors to rehabilitate these types of infrastructure in order to quickly rebuild coastal fisheries in the district.

However, a wider spectrum of efforts is also required to attain sustainable coastal fisheries development. In particular, the following four points are especially important: (i) post-harvest improvement, including fish processing and cold chains; (ii) the introduction of new fishing techniques adapted to different target species; (iii) the conversion of trawl fishery into other fishing gear,<sup>16</sup> and (iv) the establishment of a community-based fishery management system. Limited coastal fisheries resources should be utilized more wisely through the implementation of activities based on these four points.

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<sup>16</sup> Trawl fishing was banned in December 2010 in Sri Lanka. However, trawl fishermen in Jaffna District have insisted on reopening these areas to fishing, because a large number of Indian trawlers continue to catch fish in the water near Jaffna Peninsula.

## (2) Offshore Fisheries Development

Many active fishermen in the district are eager to exploit offshore fishing grounds with larger fishing craft called multi-day boats. More multi-day boats should be launched in the district for this purpose in the near future.

The most serious constraint on expanding the multi-day boat fleet in Jaffna is that no suitable fishing harbour is available for them. The first multi-day boat managed by the FCS Unions' Federation was moored in Karainagar Harbour, which is far from the fishing ground and inconvenient for active fishermen hoping for the development of offshore fishing in Point Pedro. Construction of a new fishing harbour will be needed in order to promote offshore fisheries development in Jaffna.

## (3) Aquaculture Development

As NARA has reported, most brackish water sources are not suitable for aquaculture in Jaffna District, because salinity levels are above the acceptable range during many months of the year. However, as indicated in Figure 5- 6, shallow waters around the islands in the western part of the district could be readily used for aquaculture. Aquaculture trials were not carried out for decades until 2009 due to the conflict, though some limited attempts were made before the conflict. It is now feasible to begin aquaculture experiments with several promising species, such as seaweed, sea cucumber, and milkfish, to prepare the grounds for future aquaculture development. Therefore, the Team recommended the implementation of aquaculture projects for seaweed and sea cucumber farming.

### **5.3.5 Basic Development Framework**

#### (1) Overall Vision

Well-balanced fisheries resource exploitation, formulation of a co-management system for fisheries resources, and rehabilitation of fisheries infrastructure are the major challenges for fisheries development as described in Table 5- 13. Therefore, the Team proposes an overall development vision for Jaffna's fisheries sector as follows.

Overall Vision: To realize sustainable fisheries development through well-balanced fisheries resource exploitation and the formulation of a resource management system.

#### (2) Three Development Categories and their Development Strategies

This report repeats that sustainable fisheries sector development in Jaffna District requires three categories of development. This section describes what the Team considers would be the ideal status, as opposed to the present status for these three development categories in terms of resource utilization, productivity, marketing and infrastructure, and concerned institutions.



### 1) Establishment of a Sustainable System for Coastal Fisheries

The Team projected various indicators for establishing a sustainable system for coastal fisheries. They are shown in Table 5- 14 for different periods.

At the First Development Workshop held on 19 February 2011, the Team proposed that, in the mid-term, coastal fisheries production ought to recover to the level of 30 years ago, which was around 40,000 tons per year, and could maintain that level in the long-term. However, the participants argued that the proposed production level would be difficult to attain because of illegal fishing by Indian trawlers and the rapid increase of small fishing craft in Jaffna Peninsula; they argued that a level of 20,000 to 30,000 tons would be more realistic.

Ice-making plants and other fisheries-associated industries would develop and increase their production to catch up to the level of fish production. Additionally, the rehabilitation and construction of fisheries infrastructure must continue without fail to allow balanced development of coastal fisheries, which would cause the unit price of fish to increase accordingly.

Women's groups would engage in fish processing, and, in the mid-term, the processed fish production would increase gradually, reaching 20% higher than the level in 2010. Some of the local fish buyers would begin to export fish from Jaffna during this time and would increase their fish exports up to 5,000 tons in 2021, i.e., to 20% of the coastal fisheries production.

Community-based fishery management would be more popular in the short-term and would become more formalized in the mid-term, since the trial practice of a co-management system would start for coastal fisheries based on the results of a coastal resources assessment. In the course of such progress toward sustainable coastal fisheries, the percentage of active fishers is expected to increase from 23% in 2008 to more than 35% in the mid-term.

**Table 5- 14: Indicators for Establishment of a Sustainable System for Coastal Fisheries**

Category			Coastal Fisheries			
Goal			Establishment of Sustainable System for Fisheries			
			Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	Long-term (2021- )
<b>Livelihood Enhancement</b>	Input supply	Ice making capacity	50 ton	150 ton	300 ton	1,000 ton
	Optimum Utilization of Resources	Community-based fishery management	Introduced on the District level	Popularized in the District	formalized in the District	
		<b>Co-management system</b>			Introduced in the District	Generalized in the District
	Productivity Improvement	Fisheries production (ton)	22,000 ton	25,000 ton	25,000 ton	25,000 ton
		Fisheries value (LKR)	LKR 4,400M	LKR 5,000M	LKR 5,500M	LKR 6,000M
		Processed fish production (ton)	1,000 ton	1,200 ton	1,200 ton	1,200 ton
		Processed fish value (LKR)	LKR 500M	LKR 600M	LKR 600M	LKR 600M
		Fish export from the District (ton)		50 ton	500 ton	5,000 ton
		Fish export from the District (LKR)		LKR 15M	LKR 150M	LKR 1,500M
	Marketing Improvement	Number of local fish exporters		10 companies	20 companies	30 companies
		Rehabilitation & construction of fish auction hall	15	15	15	15
		Rehabilitation & construction of fish market		2	2	2
	Infrastructure Improvement	Rehabilitaation & construction of fish landing sits/jetties	5	5	5	10
		Number of fishermen's locker	10	15	15	15
		Number of ice storage	10	15	15	15
		Number of safety infrastructure for fishing	10	15	15	15
<b>Institutional Development</b>	Strengthening of Fishermen's Cooperative Societies	Rate of active fishermen	25%	30%	35%	40%
		No. functioning Idiwala bank	12	20	30	30
		No. of new model FCS	2	10	30	50
		Improvement of mutual assistant system of FCSs	Improved in certain extent	Well improved		
	Strengthening of District Level Administration	No. of Fish inspectors	10	20	20	25
		No. of fish landing sites which new statistic system covers in the District		20	60	128
	Strengthening of National Level Administration					

2) Offshore Fisheries Development

Table 5- 15 shows several indicators for offshore fisheries development over different periods.

The offshore fisheries would increase annual production up to 7,500 tons using 150 multi-day boats in the mid-term (between 2017 and 2020); and up to 20,000 tons using 400 multi-day boats in the long-term (after 2021). Nationally, offshore fisheries production is planned to increase from 123,950 tons with 2,464 boats in 2007 to 183,020 tons with 3,243 boats in 2016.

**Table 5- 15: Indicators for Offshore Fisheries Development**

Category			Offshore Fisheries			
Goal			Exploitation of Deep Sea Fishing Ground			
			Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	Long-term (2021- )
<b>Livelihood Enhancement</b>	Input supply	No. of fuel supply station for multiday boats		2 stations	5 stations	10 stations
		No. of water supply stations for multiday boats		5 stations	10 stations	20 stations
	Optimum Utilization of Resources	Covering ratio of Vessel Monitoring System		20%	50%	75-100%
		Covering ratio of license system			20%	50-100%
	Productivity Improvement	No. of Multi-day boat	30 boats	70 boats	150 boats	400 boats
		Fish catch production (ton)	1,500 ton	3,500ton	7,500 ton	20,000 ton
		Fish catch value (LKR)	LKR 300M	LKR 700M	LKR 1,500M	LKR 4,000M
		Processed fish production (ton)			1,500 ton	4,000 ton
		Processed fish value (LKR)			LKR 600M	LKR 1,600M
		Fish export from the District (ton)		50ton	1,000ton	5,000ton
	Marketing Improvement	Fish export from the District (LKR)		LKR 15M	LKR 300M	LKR 1,500M
		Number of local fish exporters		10 companies	20 companies	50 companies
	Infrastructure Improvement	Construction of fish market for offshore fishery		1	3	5
		No. of fishing harbor for multiday boat		1	2	3
	No. of mooring site for multiday boat	1	3	6	14	
<b>Institutional Development</b>	Strengthening of Fishermen's Cooperative Societies	No. of offshore fishery cooperative societies		1	3	10
		No. of member fishermen of offshore fishery cooperative societies		500	1,500	5,000
		No. of credit apply for building multiday boat	5	25	75	200
	Strengthening of District Level Administration					
	Strengthening of National Level Administration					

Fish processing using the catch from offshore fisheries is expected to appear at around 1,500 tons per year in the mid-term and increase to 4,000 tons by 2021. To achieve this, fish processing factories would need to be invited to an offshore fishing-port complex, which must be constructed, probably in Point Pedro. The direct fish export from Jaffna's offshore fisheries would start in the short-term, and it would steadily increase afterward.

Construction of mooring sites and fishing harbours for multi-day boats would greatly help offshore fisheries development. Construction of mooring sites is an immediate requirement for multi-day boat introduction; fishing harbour construction would also encourage offshore fisheries development in Jaffna District. The first offshore fishery cooperative society would be established in the short-term, and there would be an increase to ten societies in the long-term, with about 5,000 members working in offshore fisheries. Those fishermen would be given access to a credit system to build multi-day boats;

there would be roughly 200 credit applications by 2021. A vessel monitoring system would be introduced in the short-term, aiming to cover nearly 100% of registered multi-day boats in the long-term.

### 3) Aquaculture Development

According to fisheries statistics, inland and aquaculture fish production in Jaffna District was 80 tons in 2010. However, this production figure seems to come mostly from the inland fishery subsector, since the Team has not recognized any aquaculture production in the district in 2010 (except for one case).<sup>17</sup> Table 5- 16 shows various indicators for aquaculture development by period.

Between 2017 and 2020, 50 sets of fish pens would be used to culture sea cucumbers, resulting in the production of 20 tons per year. Five hundred units of long line would also be set in the sea to produce 450 tons of seaweed per year (dry weight). Twenty ha of earthen ponds would produce 20 tons of milkfish per year, and 10 sets of cages would produce other possible marine species, such as sea bass, at around 10 tons per year. The total production quantity and value would reach 500 tons per year and LKR 50 million, respectively.

Two aquaculture cooperative societies would be established in the near future, and another two FCSes would develop themselves according to a new model of FCS adapted to aquaculture activities. More than 200 fish farmers would work in the aquaculture subsector, and they would belong to these FCSes. A fish seed production center would be set up in the short-term to produce seed of shrimp; in the mid-term, another fish seed production center would be set up to produce seeds, including shrimp seeds (1,000,000 pcs./year), sea cucumber (200,000 pcs./year), and milkfish fingerlings (100,000 pcs./year).

In the long-term (after 2021), 100 sets of fish pens would culture 40 tons of sea cucumber per year. Similarly, 1,000 units of long line would produce 900 tons of seaweed per year (dry weight), 50ha of earthen ponds would produce 50 tons of milkfish, and 30 sets of cages would produce 30 tons of sea bass and grouper. The total production volume and value would reach 1,000 tons per year and LKR 110 million.

In the long-term, three new aquaculture cooperative societies would be established, and another three FCSes would evolve into a new FCS model. About 1,200 fish farmers would belong to both types of FCSes. Three fish seed production centers would supply seeds, including shrimp (5,000,000 pcs./year), sea cucumbers (500,000 pcs./year), and milkfish fingerlings (500,000 pcs./year).

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<sup>17</sup> There is some data showing that cultured shrimp were harvested successfully out of an earthen fishpond exploited in Karainagar, Jaffna District in 2010. When the Team visited the site in June 2010, it was informed that 50,000 post larvae of shrimp would be stocked in the pond in August 2010.

**Table 5- 16: Indicators for Aquaculture Development**

Category		Aquaculture				
Goal		Development of New Technology for Fish Production				
		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	Long-term (2021- )	
<b>Livelihood Enhancement</b>	Input supply		Shrimp: 500,000	Shrimp:1,000,000 Sea cucumber: 200,000 Milkfish fingerling:100,000	Shrimp: 5,000,000 Sea cucumber: 500,000 Milkfish fingerling: 500,000	
	Seed supply					
	Optimum Utilization of Resources	Release the stock to Jaffna lagoon		Shrimp: 100,000	Shrimp:200,000 Sea cucumber: 40,000	Shrimp: 1,000,000 Sea cucumber: 100,000
	Productivity Improvement	Aquaculture production (ton)	56 ton	193 ton	500 ton	1,000 ton
		Aquaculture value (LKR)	LKR 5M	LKR 18M	LKR 50M	LKR 110M
	Marketing Improvement					
	Infrastructure Improvement	No. of fish pen	5	20	50	100
		No. of fish cage			10	30
		No. long line for sea weed	60 units*	200 units	500 units	1,000 units
Area of fish pond			5ha	20ha	50ha	
	No. of seed production center		1	2	3	
<b>Institutional Development</b>	Strengthening of Fishermen's Cooperative Societies	No. of aquaculture cooperative societies		2	4	7
		No. of new model FCSfor aquaculture		2	4	7
		No. of fishers who belong to aquaculture cooperative societies		225	580	1,180
		Involvement of socially vulnerable people	Returnees & WHFs are involved in aquaculture	Returnees & WHFs get sustainable income from aquaculture		
	Strengthening of District Level Administration	No. of aquaculture staff		2	4	7
		No. of technical staff in seed production center		2	5	8
	Strengthening of National Level Administration					

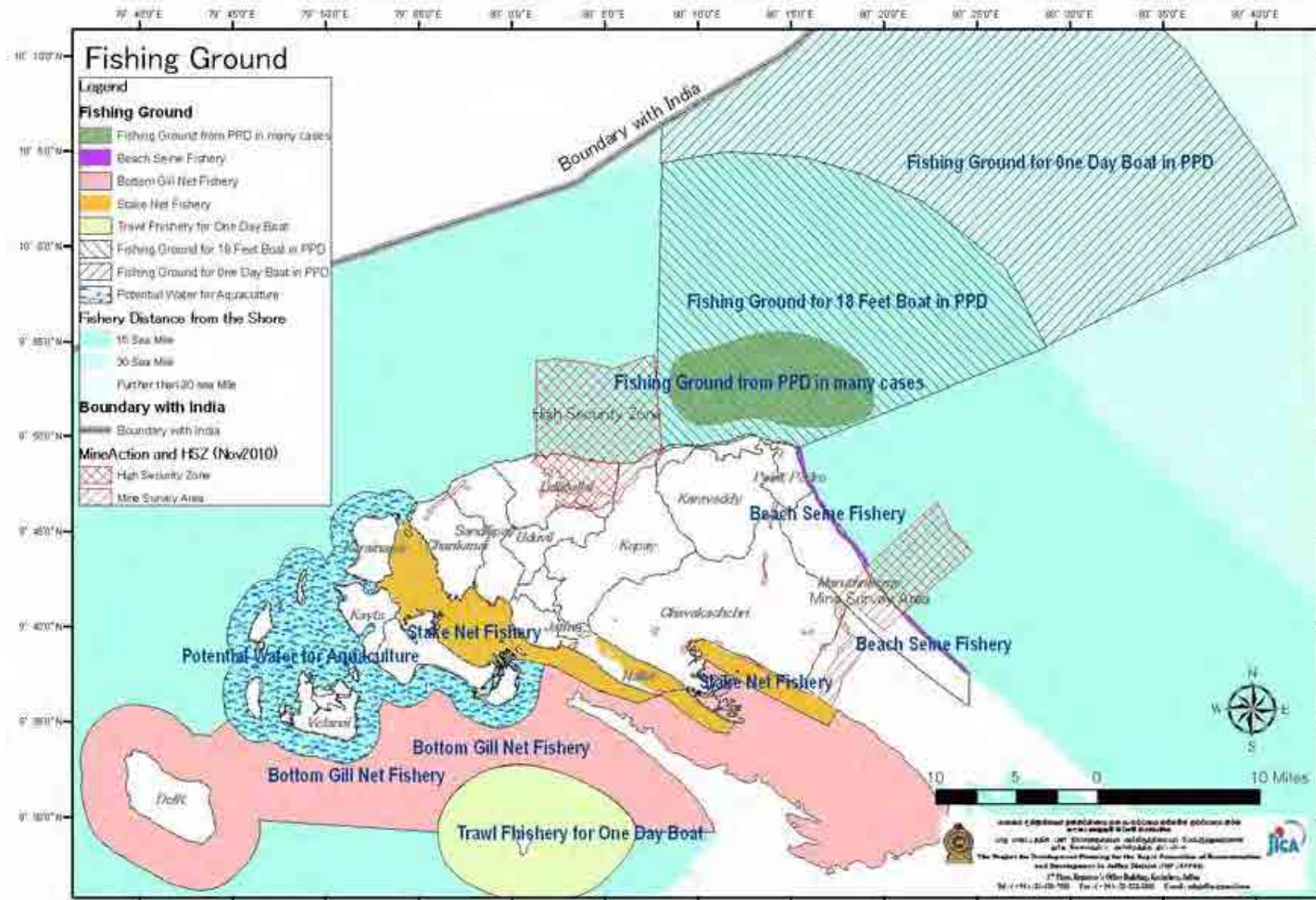


Figure 5- 6: Expected Future Fishing Grounds in Jaffna District

### (3) Expected Fishing Grounds and Potential Water for Aquaculture

Figure 5- 6 shows the expected fishing grounds for the fishers of Jaffna District and the water that may potentially be available for aquaculture development.

Local fishermen are still constrained to the restricted fishing grounds because of the remaining HSZ, as indicated in Figure 5- 6. Removal of the HSZ in the future would enable the fishing operations in a wider range. Other constraints (e g., bad weather, relatively expensive fuel cost, and a shortage of ice) also confine their fishing operations to the fishing grounds nearest to their villages. Bigger fishing craft and a better supply of ice would enable them to fish farther afield, because the possible fishing areas for fishers in Point Pedro, for instance, are theoretically up to 15 sea miles from shore. Fishermen with one-day boats reach further fishing grounds as indicated in Figure 5- 6, and those with multi-day boats would exploit the further fishing grounds as well.

Most of the lagoon is a fishing ground for stake-net fisheries for catching shrimp and small fish. Many fishermen in Gurunagar and adjacent areas use bottom gill nets in the water around Delft Island to the west and in the Jaffna Lagoon to the east. One-day boat trawlers catch shrimp and sea cucumbers in the water as far as 15 sea miles to the south of their villages though the trawl fishing was banned in December 2010. Introduction of multi-day boats would enable them to fish much further to the south.

The water around the islands of Velanai, Pungudutivu, and Karainagar appears promising for aquaculture development. The large areas of shallow water are protected by reefs that block rough waves from offshore, thus providing suitable areas for aquaculture development. Several pilot projects should be planned to test the possibilities for aquaculture development in the area.

## **5.4 Promotion of Community Approach**

Intitutional capacity development of producers' organization or CBOs is positioned in lower row in the Framework of Development to support agriculture and fisheries sectors that are presented as main columns in the Framework.

Intitutional capacity development of CBOs for producers is important for enhancement of sustainability in production activities. Well managed organizations develop productivities as well as sales competitive power by utilizing common resources and practical network with stakeholders. Those CBOs can contribute to the promotion of living environment as they have community resources and mechanism to use them. Other types of CBOs, such as CBOs for village development and Self Help organization, also need development of their institutional capacity. Those CBOs would contribute to promotion of living environment and social welfare in villages along with improving mutual assistant mechanism. Institutional capacity development is one of the most important points in community approach.

Another essential point in community approach is promotion of social inclusion. CBOs should function without marginalizing any social groups even they are difficult to produce materially so much. Every CBO needs to have a mechanism to include vulnerable groups, such as women, WHFs, persons with disabilities, elders, IDPs and the poor. Formulation of CBOs by particular groups is also effective measure to promote social inclusion by mobilizing and encouraging vulnerable groups. For example, village women who are generally not given a leading role in producers’ organizations, obtain opportunity to participate in village development. Motivated WRDSs organize tuition class for children and provide loan for income generation.

(1) Goal of community approach

Goal of community approach is to enable CBOs to function as social foundations based on mutual assistance for socio-economic development, taking the following roles at the community level.

- Support for local industries (e.g., agriculture, fisheries, small business)
- Support for social services and promote community safety net mechanism (e.g., developing supporting mechanisms for the vulnerable groups, peer supporting systems in communities)
- Focal points of community as an area representatives

**5.4.1 Institutional Development**

(1) Steps for institutional development

Strengthening of CBOs would take place in a phased manner; immediate, short-term, mid-term development stages. Following table shows specific visions of CBOs at each stage.

**Table 5- 17: Process of CBO Strengthening**

Stages	Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
Role of CBOs	Community participates in village rehabilitation work through CBOs	Community participates in development projects through CBOs	CBOs carries out development projects/ activities for sustainable socio economic development
Function of CBOs	<ul style="list-style-type: none"> <li>· Mutual assistance among neighbor/relations</li> <li>· Function of CBOs               <ul style="list-style-type: none"> <li>Basic performance of CBO leaders</li> <li>Organize committee meeting</li> <li>- Mobilization of members for assistance</li> <li>Basic records</li> </ul> </li> <li>· Communication with relevant organizations               <ul style="list-style-type: none"> <li>- Respective government officers provide supervising and consultation for CBOs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>· Mutual assistance through CBOs</li> <li>· Function of CBOs               <ul style="list-style-type: none"> <li>Performance of Community leaders</li> <li>Organize general / committee meetings</li> <li>Proper records with transparent practices</li> </ul> </li> <li>· Network with stakeholders               <ul style="list-style-type: none"> <li>-Communication between CBOs and multiple stakeholders</li> </ul> </li> <li>· Common facilities with community maintenance system</li> <li>· Contribution to the village (e.g., event, cleaning common places)</li> </ul>	<ul style="list-style-type: none"> <li>· Mechanism for mutual assistance</li> <li>· Functions of CBOs               <ul style="list-style-type: none"> <li>Proper performance of leaders</li> <li>- Organize general / committee meetings</li> <li>Proper records with transparent practices</li> </ul> </li> <li>· Dynamic network with stakeholders at all levels               <ul style="list-style-type: none"> <li>-Two-way communication between CBOs and multiple stakeholders</li> <li>-Capacity to find appropriate stakeholders</li> </ul> </li> <li>· Common facilities with sustainable community maintenance system</li> <li>· Contribution to the village by creating opportunities to inspire communities</li> </ul>



(2) Approach

The institutional development of CBOs would take place along the following two parts:

1. Assuring the adoption of the community approach for all village development projects
2. Improving the setup to promote the community approach

The following table presents the stage-specific approaches for the institutional development of CBOs.

**Table 5- 18: Approaches for Institutional Development of CBOs**

Stages	Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
Approach	<b>Assuring the adoption of the community approach for all village development projects</b>		
	- Mobilize communities to participate in rehabilitation projects through CBOs (community is facilitated to take their responsibilities)	- Facilitate CBOs to implement small scale development project, raising awareness on community self-reliance and responsibility. (Community participation in planning, implementation, monitoring, and O&M)	- Facilitate CBOs to implement development project in sustainable manner assuring community ownership and responsibility. (Community demand driven, community's process from planning to consolidation stages, promotion of diversification of CBO activities)
	<b>Improving the setup to promote the community approach</b>		
	- Assessment of the human resources - Raise awareness on community approach among stakeholders, analyzing stakeholders' capacity	- Train stakeholders in community approach along with practical exercise (capacity development)	- Develop mechanism to promote community approach with the government - Improve training mechanism with the government in community approach to assure stakeholders' capacity building.

1) Assuring the adoption of the community approach for all village development projects, CBOs would be strengthened through experiences in project implementation right from the planning stage to the consolidation stage. Communities would acquire planning skills and learn management techniques for village development, as they would gain more experience under proper guidance and training. They can learn rules and regulations of the relevant government services for village development. This would promote the motivation, self confidence/efficacy, and standing of communities and strengthen their network among stakeholders.

Levels of community participation should be designed on the basis of the capacity and condition of the communities. In the immediate development stage, communities' responsibility for project implementation would be limited: the role of CBOs would be to facilitate community participation in rehabilitation activities. In the midterm development stage, CBOs would be required to execute community-oriented activities. They would be trained to acquire the skills and facilities necessary for projects. To achieve the midterm development goal, CBOs would play the main role throughout, right from planning to consolidation. Once they are experienced, CBOs would develop their community, by utilizing community resources if they have access to information about supporting development activities.

2) Developing Set up to Promote Community Approach.

Improvement of the setup with the government departments to promote the community approach is necessary for sustainable and quality institutional development of CBOs.

In the immediate development stage, the assessment of the availability of human resources and awareness of the community approach would be made by the service providers. Training for the basic knowledge and skills to facilitate communities would be important during short-term and midterm development stages. Improvement of the mechanism to promote the community approach would be essential in midterm or long-term development stage. Management-level officers would need to develop their ability to innovate mechanisms in order to (1) train in community approach for the government, CBOs, and other stakeholders and (2) promote a system to adopt the community approach in national services.

### (3) Strategies

The promotion of the community approach would involve several important strategies.

#### a) Mixed development stages in the community

Most of the communities in Jaffna have mixed development stages. Returnees are still in the rehabilitation stage while host communities want the project for longer-term development. Therefore, assessment of the condition of the communities is essential for project design.

#### b) Demand-oriented project

The efficiency and effectiveness of the project increases if it is formulated on the basis of the real demand of the community. Stakeholders have to develop the capacity of the community such that it can identify the real needs, as the community can make a “wish list” type plan in the first stage.

#### c) Incorporation of CBO capacity development

Training for capacity development of CBOs should be incorporated in the project cycle in order to ensure quality CBO performance. Service providers must supervise and offer advice throughout the project term.

#### d) Diversification of CBO activities

Strengthening the community is useful if CBOs can address community needs other than those planned because the community identifies these needs without the help of the organizations that aid them. The needs could be related to socioeconomic, cultural, and religious development. If the project has an optional package to support these additional needs, it would be helpful to promote the motivation of CBOs and diversion of their activities. Nevertheless, CBOs should be guided to maximize community resources to accommodate such needs.

#### e) Practical training for field level officers

Field level officers such as RDOs, SSOs, AIs, ADOs, FIs, and GNs require practical skills for the community approach. If training is planned as a component of community development projects, field level officers can improve their skills effectively through practice.

f) Technical transfer with the south

As mentioned, many CBOs in Sri Lanka have developed their villages through the community approach. Field level officers and community leaders can draw concrete ideas on their community potential by arranging for technical transfer or exchange programmes.

### 5.4.2 Consideration for Socially Vulnerable People

(1) Goals

As discussed in Chapter 2, there are various hardships and challenges faced by socially vulnerable people. Throughout the Project, the Team paid focused attention to IDPs and WHFs, as these are considered vulnerable and require livelihood support. The following are the goals to improve the livelihood of socially vulnerable people and help them restore their normal lives. The table below shows the goals to promote social inclusion.

**Table 5- 19: Goals to Promote Social Inclusion**

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
Goal	Social Inclusion	1 Availability of data/information on socially vulnerable groups/Persons with Special Needs (PWSN) with the relevant government organizations 2 Availability of sufficient support to meet the basic needs for PWSN 3 Completion of resettlement process and meeting the housing needs for IDPs 4 Establishment of platform (an arena for sharing) among socially vulnerable groups/PWSN 5 Connection with religious groups/CBOs for social support 6 Involvement in government officials	1 Availability of data/information on PWSN with the relevant government organizations/community leaders 2 Availability of sufficient support to meet the basic needs for PWSN 3 Completion of resettlement process and meeting the housing needs for IDPs 4 Establishment of platform (an arena for sharing) among socially vulnerable groups/PWSN 5 Connection with religious groups/CBOs for social support 6 Capacity development of government officers 7 Capacity building of CBOs to support socially vulnerable groups/PWSN (included in Institutional Dev't) 8 Availability of individual/institutional opportunities for livelihood development with in-kind, technical, legal, financial, or marketing support 9 Involvement of socially vulnerable groups/PWSN into CBO activities	2 Availability of sufficient support to meet the basic needs for PWSN through established mechanism/system  6 Capacity development of government officers 7 Leadership development among CBO members for socially vulnerable groups/PWSN 8-1 Availability of individual/institutional opportunities for livelihood development with in-kind, technical, legal, financial, or marketing support 8-2 Self-reliant business development by microfinance schemes (included in Institutional Dev't) 9 Involvement of socially vulnerable groups/PWSN into CBO activities 10 Industry development for sustainable employment

– Immediate

For the immediate stage, the recovery of disturbed lives should be given the highest priority. The goals are indicated with a brief explanation.

1. Availability of information on socially vulnerable groups or Persons with Special Needs (PWSN) from relevant government organizations: Vulnerable conflict-affected communities vary in their backgrounds and living circumstances. Some IDPs may move to other places, whereas others may settle in their present locations. There may be returnees who wish to hide themselves to avoid unnecessary problems. An assessment of their situation is necessary to find appropriate measures to involve them in the restoration and development activities. Needless to say, this assessment should be carried out carefully, adopting a “do no harm” policy.
2. Availability of sufficient support to meet the basic needs for socially vulnerable people: Some socially vulnerable people suffer from limited assistance and no income. The Team found that

42% of interviewed widows are PAMA recipients, but the assistance provided is paltry (LKR 100-210), and seems even less significant when compared with the present costs of living. Sufficient support must be ensured to meet the basic needs for socially vulnerable people.

3. Completion of the resettlement process and meeting the housing needs for IDPs: More than 45,000 IDPs in the district were considered to live in temporary housing, such as staying at the homes of friends or relatives. Their normal lives cannot be recovered unless resettlement to their original home or a new location can be ensured. Completion of the resettlement process and meeting the housing needs for IDPs are necessary at early stages.
4. Establishment of a platform (an arena for sharing) among socially vulnerable groups/PWSN: Many socially vulnerable people have psychological disorders or trauma due to the prolonged conflict. A widow expressed that she did not wish to go out or communicate with others, and she lost her motivation to live due to the trauma caused by losing her husband. These people need a platform to communicate with others as an initial step toward community involvement.
5. Connection with religious groups/CBOs for social support: Many socially vulnerable people have earned no income at all, relying on governmental or social and family assistance. While they received assistance from the government and family members, they also need to be connected with social support through religious groups/CBOs in order to provide security in their lives.

– Short-term

Following the immediate stage to recover damaged lives, the goals below are specified for the short-term stage. Goals 1 through 5 above are expected to be continued along with the following:

6. Capacity development of government officers: To embody the above-mentioned goals, such as collecting information and creating a platform for socially vulnerable people, the capacity development of government officers is crucial. Management capacity and knowledge, along with community development techniques, can be pointed out as focused areas for enhancement.
7. Capacity building of CBOs to support socially vulnerable groups/PWSN (included in Institutional Development): Capacity building of CBOs will enable them to involve socially vulnerable groups into their community activities. The leadership development of members needs to be nurtured. The Team observed a dominant leader in several CBOs. In order to create a democratic environment for the community, more leaders should be skillfully trained for the benefit of more people in the CBOs.
8. Availability of individual/institutional opportunities for livelihood development with in-kind, technical, legal, financial, or marketing support: A lack of individual and institutional opportunities for livelihood development was cited as a major issue for socially vulnerable people. Many IDPs lost all the assets they once owned, including their land, vehicles/motorcycles/bicycles, and livelihood-related equipment. The recovery of lost assets or regaining existing assets in Vanni is an initial point. Further, many IDPs faced technical, legal, financial, or marketing problems for the development of their livelihood. For instance, IDPs who worked as agriculture labourers did not have the time or sufficient techniques/resources to attend

technical training. They relied on daily income and could not afford to lose such income for even a single day.

9. Involvement of socially vulnerable groups/PWSN in CBO activities: Along with enhancing CBOs for the strengthening of social inclusion, socially vulnerable people themselves need to be aware of the importance of CBO activities. The affiliation of CBOs was not as high (36%) for IDPs due to their resettlement plans, difficulties in obtaining membership due to legal reasons, and lack of time. Helping socially vulnerable people receive proper information and participate in community activities can be encouraged by government officers.

– Mid-term

As we evolve into the mid-term stage, items 2, 6, 7, 8, and 9 above are expected to continue. The added items for the mid-term stage are as follows:

4. **Formation and strengthening of Self Help Groups (SHGs):** Following the establishment of a platform among socially vulnerable groups in the previous stages, SHGs that support each member in terms of their livelihood and finances can be formed and strengthened.
- 8-2. **Self-reliant business development through microfinance schemes (included in Institutional Development):** In relation with the “8. livelihood-development opportunities” mentioned above, microfinance schemes may enhance self-reliant business development with the obligation of repayment.
10. **Industry development for sustainable employment:** Larger-scale industry development will bring more employment, including to socially vulnerable people, promoting further development of the district.

(2) Approaches

In response to the goals above, the following approaches are to be taken for realization. The table below shows the approaches to promote social inclusion.

**Table 5- 20 Approaches to Promote Social Inclusion**

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Approach	Social Inclusion	*Shaded bar parts can be categorized as the main roles of the Government.			
		1. Assessment on living condition and needs of socially vulnerable groups and PWSN			
		2. Provision of sufficient assistance to meet the basic needs for socially vulnerable groups and PWSN			
		3. Promotion of resettlement process and meeting the housing needs for IDPs			
		6. Promotion of capacity development of government officers			
		4. Support for the establishment of platform (an arena for sharing) among PWSN		4. Formation and strengthening Self Help Groups	
		5. Support to connect with religious groups/CBOs for social support			
		7. Nurturing leadership among CBO members			
		8. Promotion of individual/institutional opportunities for livelihood development			
				9. Promotion to involve vulnerable groups in CBO activities	
		10. Promotion of industry development for sustainable employment			

1. Assessment of living conditions and needs of socially vulnerable groups and PWSN
2. Provisioning of sufficient assistance to meet the basic needs for socially vulnerable groups and PWSN

3. Promotion of resettlement process and meeting the housing needs for IDPs
4. Support for the establishment of a platform (an arena for sharing) among PWSN, and the formation and strengthening of SHGs
5. Connecting with religious groups/CBOs for social support
6. Promotion of capacity development of government officers
7. Nurturing leadership among CBO members
8. Promotion of individual/institutional opportunities for livelihood development
9. Promotion to involve vulnerable groups in CBO activities
10. Promotion of industry development for sustainable employment

### (3) Special Consideration

In addition to the approaches above, special consideration would be necessary.

#### **Women's empowerment**

Agricultural- and fishery-related CBOs are mostly male-oriented, while the social status of widows is weak. Therefore, organizing groups of WHFs under agriculture- and fishery-related CBOs is recommended for assuring their benefit.

#### **Social inclusion in the development process**

Attention is generally paid toward supporting socially vulnerable groups during the rehabilitation stage, as such groups may be outside the development activities once the phase moves to a more full-fledged development. Strengthening the capacity of vulnerable groups and increasing awareness of social inclusion for communities should be addressed to avoid omitting the groups from the mainstream development.

#### **PWD**

The social inclusion of PWDs, especially through the creation of working opportunities, is not a simple agenda, as the conditions of their disabilities differ. Such inclusion can be promoted as diversification within agriculture/fishing industry proceeds in the future, and awareness of the importance of social inclusion is raised in these communities.



**Chapter 6**  
**Quick Impact Pilot Projects**

## **Chapter 6 Quick Impact Pilot Projects**

### **6.1 Outline of the Quick Impact Pilot Projects**

#### **6.1.1 Purpose of the Quick Impact Pilot Projects**

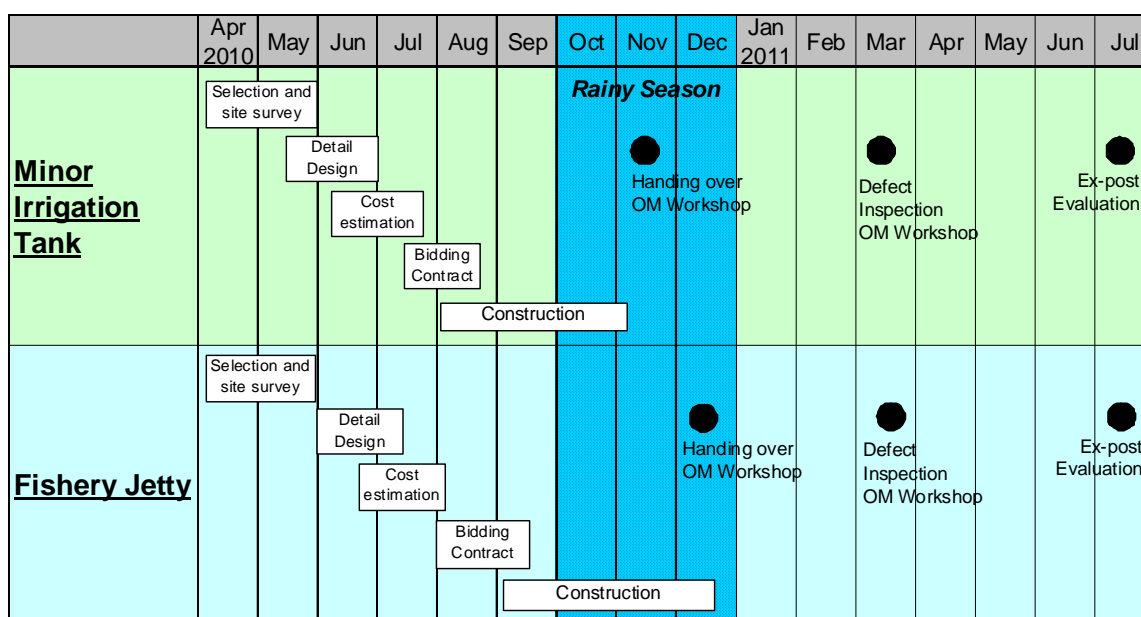
PDP Jaffna had the component of Quick Impact Pilot Projects (QIPP), also formerly called “the Urgent Rehabilitation Component (URC) Batch 1,” to examine effective approaches and methodologies for rehabilitation and reconstruction of the conflict affected Jaffna through the implementation of quick impact type renovation and construction works. It is essential for the conflict affected population to restore their livelihoods immediately through quick impact type rehabilitation of infrastructure, as well as preparing the Road Maps. Therefore, the QIPP aimed to deliver peace dividends and motivates the conflict-affected people and communities to rehabilitate their livelihoods as the immediate action by the Project. However, the QIPP have limited coverage and budget, and is implemented only in selected locations in Jaffna District. Thus, careful planning and implementation, as well as securing accountability and transparency were required to avoid negative responses and resentment from people who were not selected. The QIPP also were formulated to aim at producing synergy effects with the Pilot Projects and the regional development plans.

#### **6.1.2 Procedure of the Quick Impact Pilot Projects**

The formulation and implementation of each QIPP had to consider the storms of the rainy season from October to December in Jaffna that might negatively affect construction works. In Jaffna, 68% of the annual rainfall is concentrated during the rainy season called *Maha*, although Jaffna is categorized as a dry zone in Sri Lanka. Where quick benefits to the conflict-affected communities are anticipated, lack of construction projects under PDP Jaffna until the end of the rainy season of 2010 might be inappropriate. Thus, the Team endorsed to implement rehabilitation projects for minor irrigation tanks and fishery jetties as the QIPP, which are mentioned in the Minutes of Meetings on Scope of Works between JICA and GOSL in January 2010. The QIPP focus on quick impacts to the beneficiaries and learning lessons from the pilot works due to the short time of preparation and implementation. For instance, urgent rehabilitation of small irrigation tanks and related facilities would help to enhance effective use of reservoir water after the rainy season.

Given possible problems in the procurement and distribution of construction materials as well as climatic obstacles during the rainy season, the QIPP were planned as urgent rehabilitation projects with short-term timeframes as shown in Figure 6-1 and Table 6-1.





**Figure 6- 1: Timeframe of the QIPP**

**Table 6- 1: Chronology of the QIPP**

Major Event	Small Irrigation Tank	Fishery Jetty
Reconnaissance Survey for Proposed sites	End of April to Middle of May 2010	
Topographic Survey	Middle to End of May 2010	
Community Profiling Survey	Middle of May to Beginning of June 2010	
Project Approval at the 3 <sup>rd</sup> District Forum	18 June 2010	
Ratification Meetings on Community Contract	7 to 15 July 2010	-
BIQ (Environmental Assessment) Approval	3 August 2010	27 July 2010
Bidding	12 August 2010	19 August 2010
Contract Agreement	4 August 2010 (Community) 20 August 2010 (Contractor)	2 September 2010
Mine Risk Awareness and Safety Workshop	16 August 2010 (Community) 27 August 2010 (Contractor)	8 September 2010
Completion of Renovation Works	Beginning of November 2010	18 December 2010
Handing Over and MOU2	8 November 2010	19 December 2010
Operation and Maintenance Workshop	Beginning of November 2010	Middle of February 2011
Defect Inspection	Beginning of March 2011	Middle of March 2011
Leadership Training and Accounting Training	17 March 2011	18 March 2011
	March to May 2011	

The Team employed the selection principles for the QIPP as stated below, and conducted surveys including field reconnaissance surveys, key informant interviews at the proposed sites, and survey on social and environmental consideration.

- Select projects from the lists submitted by DAD and DFAR
- Complete renovation works before *Maha* season
- Minor irrigation tanks and fishery jetties are to be targeted
- Rehabilitating of existing facilities (not extension but renovation)
- Deliver quick impact to livelihood activities of the beneficiaries

Based on the initial surveys, the Team set up a list of essential criteria and consideration, for the selection of the QIPP as shown in Table 6- 2.

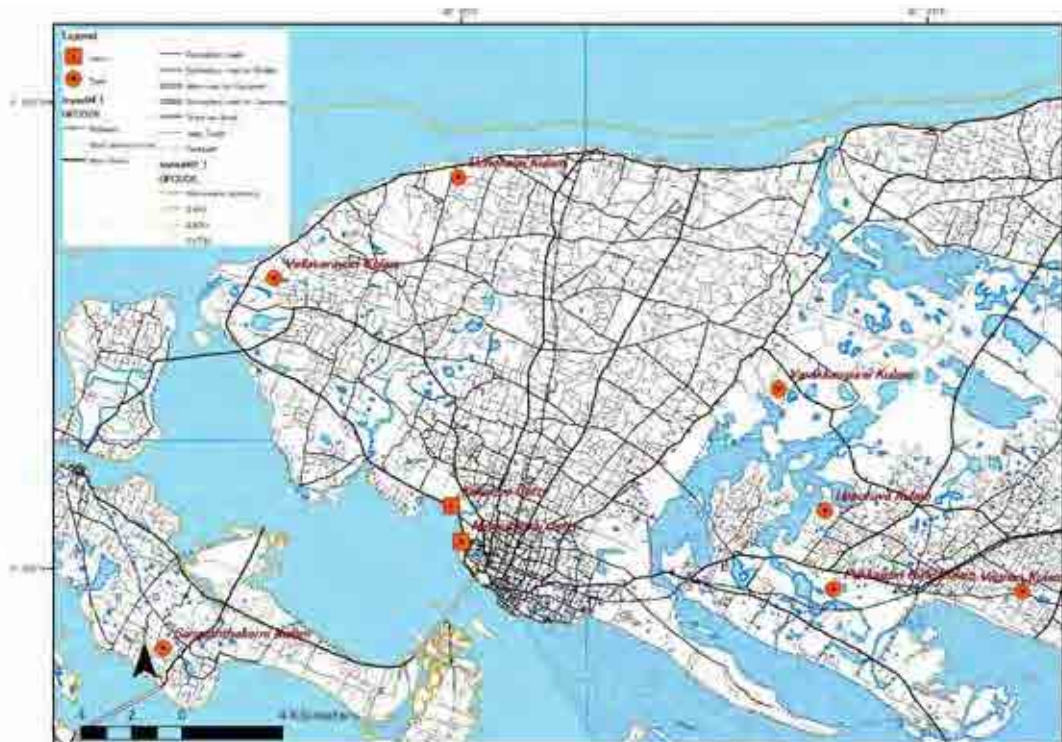
**Table 6- 2: Selection Criteria for the QIPP**

Essential Criteria	<ul style="list-style-type: none"> <li>- No risk of landmines and low risk of UXOs</li> <li>- Unnecessary to perform EIA</li> <li>- Complete essential renovation works before <i>Maha</i> season</li> <li>- Location must not be in a remote area</li> </ul>
Consideration	<ul style="list-style-type: none"> <li>- Deliver quick impact to livelihood activities of the beneficiaries</li> <li>- Local availability of resources for construction works</li> <li>- Damage level of target facility</li> <li>- Willingness, experience and skills for construction and O&amp;M of CBOs</li> <li>- Priority of DAD and DFAR</li> </ul>

According to the above selection criteria, the Team reviewed existing information provided by DAD and DFAR on the situation of landmine issues in Jaffna District and basic information of each DS division including the number of IDPs and returnees. Considering the existing secondary data and opinions of the government officials, representatives of CBOs related to the target facilities, and aid workers from other agencies, the Team selected 10 tanks and 4 jetties as the candidates of the QIPP by the middle of May. Then, the Team conducted topographic surveys at all 14 sites and prepared drawings of each facility. The topographic survey identified the volume of renovation and construction works as well as technical constraints of the facilities.

Simultaneously, the Team conducted the community profiling surveys at all 14 sites involving responsible CBOs, FOs for the tanks and FCSes for the jetties. Having the involvement of responsible CBOs in the process of renovation works is important for smooth implementation and for sustaining the outcomes of the works, as well as reflecting their needs to the projects. Especially in tank renovation, it is crucial to understand the capacity of FOs in advance before making a contract with the community. The community profiling survey identified the institutional capacity of each CBO as well as baseline data about the community as shown in Appendix 6-1.

Based on the Team’s examination above and discussions at the 3<sup>rd</sup> District Forum on PDP Jaffna, 7 tanks and 2 jetties were selected as shown on the map in Figure 6- 2.



**Figure 6- 2: Location Map of the QIPP<sup>1</sup>**

For the selection of the QIPP, the Team recognised that a project needing EIA could not be a candidate considering the limited preparation and construction period. The Team confirmed that renovation of irrigation tanks and fishery jetties were not in need of any environmental assessment if the renovation works did not require expansion of the facility. On the other hand, the CEA recommended the Team to submit BIQ for each project to the responsible authorities. BIQ is a format to confirm whether EIA is required for a project or not. The Team prepared and submitted BIQ to the responsible authorities in July. The Coast Conservation Department issued the confirmation letter for the renovation works of Navanturai Jetty and Kakativu Jetty on 27 July 2010. Also, the CEA issued the confirmation letter for the renovation of 7 tanks on 3 August 2010. These confirmed that all the QIPP do not require any environmental assessments under Guidance for Implementing of the EIA Process, No.2 (CEA, 2003).

The Team subcontracted to implement the renovation works to contractors and CBOs. For the renovation of minor irrigation tanks, ratification meetings were held with FOs at all 7 sites from 7 to 15 July 2010. The ratification meetings were important before making the community contract to build a consensus on renovation items and procedures among all the concerned communities (DAD, the Team, and other stakeholders such as the local governmental authority). During the ratification meetings, as mentioned above, participants confirmed the voluntary contribution by CBO, renovation items, the engineer's estimation, contribution percentage and the agreement amount for each tank. General members as well as representatives of FOs participated to the meetings. It was a great opportunity to show the accountability of the projects to the public. Following the ratification meetings, community contracts were made with six FOs. Vellavarayan Kulam (T14) has an estimated renovation cost of more than LKR 2 million. Thus, the

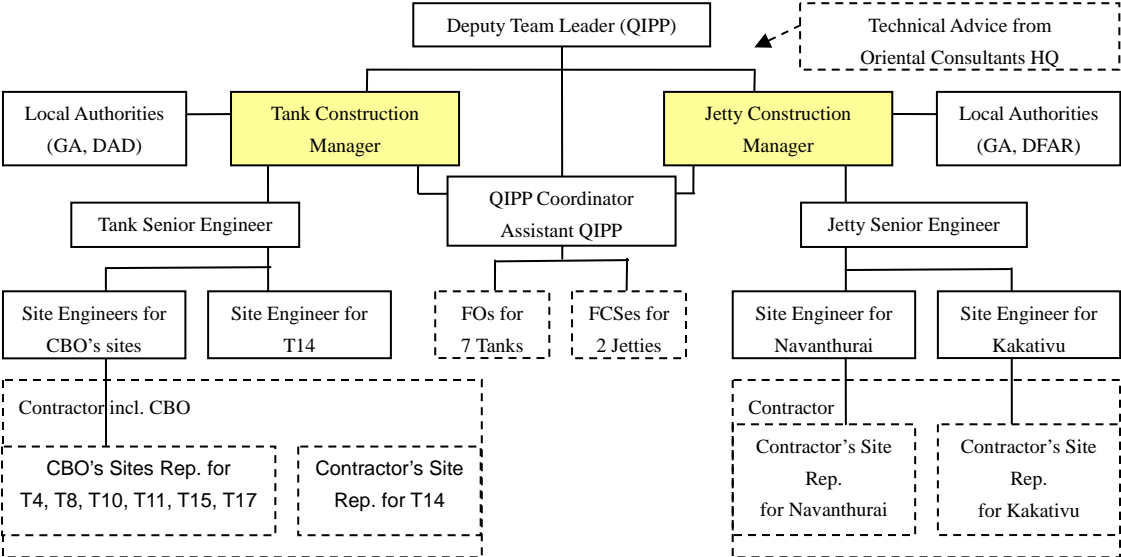
<sup>1</sup> Source: JICA Study Team

Team decided to introduce nominated competitive bidding and selected the contractor based on the bid evaluation. Concerning the renovation of the fishery jetty, also the Team also decided to introduce nominated competitive bidding for two jetties as one package considering the scale and technical difficulty of the renovation works, and selected the contractor.

**6.1.3 Management of the Quick Impact Pilot Projects**

(1) Quality Control

The Team established the construction management team for quality assurance of QIPP. The Deputy Team Leader (QIPP) was responsible for overall management, and a QIPP Coordinator and a QIPP Assistant Coordinator worked for both the Tank Renovation Team and the Jetty Renovation Team. The Tank Construction Manager led the Tank Renovation Team, including a Senior Engineer and Site Engineers. The Jetty Renovation Team consisted of the Jetty Construction Manager, a Senior Engineer, and Site Engineers. The Organogram is shown below:



**Figure 6- 3: Organization for Construction Management of the QIPP**

The Construction Managers supervised each renovation work in collaboration with in-charge officers from the local authorities. Concerning the renovation works under community contract, due to the lack of experience and insufficient technical capacity of FOs, the Site Engineers as well as the Construction Manager assisted FOs in implementing the renovation works almost everyday.

(2) Safety Management

Safety management is an essential matter of construction management to prevent accidents due to risks of construction work and other issues such as landmines and UXOs. There was the risk of UXOs everywhere in Jaffna District due to the prolonged conflict, although the target tanks and jetties were located in no-risk areas for landmines as verified by District Mine Action Office. Thus, for the purpose of safety for construction work, the Team conducted landmine and UXO risk awareness workshops at each target tank

in August 2010. For the jetty renovation, soon after the commencement of the construction work, a Safety Workshop, focusing on landmine and UXO awareness as well as safety control at the construction site, was held in September 2010 in the presence of representatives DFAR, relevant FCSes, and the Contractor, in cooperation with UNICEF Jaffna office. The main targets of these workshops were the construction workers, the CBO members and neighbours of the construction sites. The Team tried to raise their awareness about risks and security related to construction works and the post conflict situation of Jaffna.

In addition to the preventive safety management mentioned above, the Team made preparations in case of an accident. The Team prepared emergency contact lists for all construction sites against any kind of accidents. Especially in contractor contracts that used heavy machinery, the contractors were obligated under the contract to purchase a Workman Compensation Insurance and a Third Party Liability Insurance.

## **6.2 Renovation of Small Irrigation Tanks**

### **6.2.1 Target Tanks**

There are 992 irrigation tanks in Jaffna District under DAD. Most of them are minor irrigation tanks and were maintained by FO's initiatives supervised by DAD and assisted by other funding agencies traditionally even during the conflict. The characteristics of tanks in Jaffna are unique as described below:

- Basin boundary of tanks is unclear due to the flat topography (less than 5% slope)
- Most of the tank bunds are formed using the soil of the tank bed
- Many of the tanks are submerged during the rainy season
- A few tanks have spillways for use during the rainy season
- Inlet and outlet of water channel is unclear
- The FO tends to maintain cascade tanks in the area
- Many of the tanks are used for irrigation and recharge irrigation wells nearby
- No tank has any design drawings
- It is difficult to implement earth work during the rainy season

Because of the above unique characteristics of minor irrigation tanks in Jaffna, the tanks have been renovated based on the standard of Jaffna District, not the design standard of Sri Lanka. Considering the above conditions, therefore, the Team decided to adopt the design standard of DAD for the renovation of the seven tanks.

Considering the limited survey period for the QIPP, the Team conducted surveys concentrating on the proposed infrastructures from DAD in Jaffna. DAD submitted a list including 20 minor irrigation tanks to JICA. Based on the site investigation, the community profiling survey, and examination of the selection criteria and consideration including the number of farmers, risk of landmine and UXOs, necessity of EIA,

construction volume, quick impact to the beneficiaries, damage level, CBO's experience, and priority of DAD, seven tanks were selected. The selected tanks and their beneficiaries are summarised in Table 6- 3.

**Table 6- 3: Selected Minor Irrigation Tanks and Beneficiaries<sup>2</sup>**

Tank No.	Tank Name	Name of FO	Members	Direct Beneficiary (Tank Users)	Indirect Beneficiary
T4	Uppuruvil Kulam	Madduvil Centre	425	30	300
T8	Vannan Kulam	Vellampokkaddi	52	60	75
T10	Pukkaiyan Kulam	Nunavil West	284	50	120
T11	Varakaipirai Kulam	Puttur East	680	70	300
T14	Vellavarayan Kulam	Sulipuram	520	30	360
T15	Uchchalai Kulam	Ilavilai North	302	50	200
T17	Sangaththakerni Kulam	Velanai South	80	50	280

Direct beneficiary means the users of the target tanks while indirect beneficiary means those who are using other irrigation tanks adjacent to the target tanks.

## 6.2.2 Design Policy and Concept

### (1) Renovation of Tank Bund

BTL can be obtained by adding freeboard to FSL. To store floodwater in the rainy season efficiently, two-way regulators were introduced in the outlets of tanks, except for Sangaththakerni Kulam (T17). FSL was determined based on the height of the top of the wooden regulator in outlets or the crest of the spillway of the tank. The freeboards of the tanks were designed to be from 0.60 to 1.00m considering the flood and wind conditions in the rainy season. BTL and FSL of each tank are summarised in Table 6- 4.

**Table 6- 4: BTL and FSL of Tanks<sup>3</sup>**

Tank Name	Tank Bund	FSL	Freeboard	BTL
T4 Uppuruvil Kulam	152 m	4.80 m	0.70 m	5.50 m
T8 Vannan Kulam	293 m	9.30 m	1.00 m	10.30 m
T10 Pukkaiyan Kulam	347 m	4.80 m	0.70 m	5.50 m
T11 Varakaipirai Kulam	179 m	9.50 m	1.00 m	10.50 m
T14 Vellavarayan Kulam	1,170 m	9.90 m	0.60 m	10.50 m
T15 Uchchalai Kulam	132 m	10.40 m	0.90 m	11.30 m
T17 Sangaththakerni Kulam	481 m	9.23 m	0.97 m	10.20 m

Standard cross section of tank bund is designed based on DAD design standard.

### (2) Renovation of Canal Bund

The Team decided to renovate canal bunds at four tanks out of seven as the result of discussions with DAD and FOs. The target canal bunds to be renovated are shown in Table 6- 5.

<sup>2</sup> Source: JICA Study Team

<sup>3</sup> Source: JICA Study Team

**Table 6- 5: Renovation of Target Canal Bunds<sup>4</sup>**

Tank Name	Length of Canal Bund	Width of Canal Bed	Width of Bund Top	Height of Canal Bund	Slop of Canal Bund (Inside/ Outside)
T4 Uppuruvil Kulam	280 m	1.80 m	0.50 m	0.60 m	1:1.0/1:1.0
T14 Vellavarayan Kulam	51 m	3.00 m	0.75 m	1.50 m	1:1.5/1:1.5
T15 Uchchalai Kulam	140 m	3.00 m	0.75 m	0.71 m	1:1.0/1:1.5
T17 Sangaththakerni Kulam	20 m	3.00 m	0.75 m	1.50 m	1:1.5/1:1.5

**(3) De-silting**

De-silting is executed for the expansion of tank capacity. However, de-silting becomes expensive when water remains in the tank during construction because pumping is necessary. Considering the existing storage capacity of the tanks and the water level, de-silting was adopted in Varakaipirai Kulam (T11) and Uchchalai Kulam (T15). The de-silting volume was 400m<sup>3</sup>.

**(4) Other Renovation Items**

Concerning the pipe inlets, a total of 18 pipe inlets were designed considering the topographic conditions and recommendation of DAD. For the purpose of maintaining the full supply water level of tanks, two-way regulators were introduced in the main inlets of T11, T14 and T15. Outlets with two-way regulators were introduced in all tanks except for T17, which has an existing spillway. The purposes of installing outlets with two-way regulators are to maintain the full supply level of the tank, to act as a spillway to discharge the surplus inflow, and to release water into the drainage channel that irrigates the paddy fields through a flooding system. To maintain pumping at the low water level, an agricultural well was introduced to T4 in addition to minor renovations of existing agricultural wells at other tanks. Bathing steps were designed for T8 and T10 as well as minor renovations of existing bathing steps at T17. Irrigation steps were introduced to T8 to facilitate irrigation with hand-held bucket.

**(5) Designed Facilities and Drawings**

The final as-built features of the renovated minor irrigation tanks are summarised in Table 6- 6 and as-built drawings are shown in Appendix 6-2.

**Table 6- 6: Summary of Renovation Items (As-Built)<sup>5</sup>**

Tank Name	Renovation			Construction									Minor Repair				
	Tank Bund (m)	Canal Bund (m)	De-silting (m <sup>3</sup> )	Pipe Inlet Type A	Pipe Inlet Type B	Pipe Inlet Type C	Inlet with TWR	Outlet with TWR	Agricultural Well	Bathing Step	Irrigation Step	Sign Board	Inlet	Spill-way	Agricultural Well	Bathing Step	Lifting Point
	(m)	(m)	(m <sup>3</sup> )	(nos)	(nos)	(nos)	(nos)	(nos)	(nos)	(nos)	(nos)	(nos)	(nos)		(nos)	(nos)	(nos)
T4 Uppuruvil	152	280	0	2	0	0	0	1	1	0	0	2	0	0	0	0	0
T8 Vannan	293	0	0	0	1	0	0	1	0	1	4	2	1	0	0	0	0
T10 Pukkaiyan	347	0	0	3	1	0	0	1	0	1	0	2	0	0	0	0	0
T11 Varakaipirai	179	0	400	1	0	0	1	1	0	0	0	2	0	0	2	0	2
T14 Vallavarayan	1,140	51	0	1	0	0	0	1	0	0	0	2	0	0	0	0	5
T15 Uchchalai	132	140	78	1	0	3	0	1	0	0	0	2	0	0	1	0	0
T17 Sangaththakerni	481	20	0	2	0	0	1	0	0	0	0	2	1	1	0	1	0
	2,724	491	478	10	2	3	2	6	1	2	4	14	2	1	3	1	7

<sup>4</sup> Source: JICA Study Team

<sup>5</sup> Source: JICA Study Team

### **6.2.3 Institutional Arrangement**

The Team and responsible agencies of GOSL, including GA and Assistant Commissioner of DAD, have discussed and reached a consensus concerning the implementation of the QIPP. The parties agreed with the objectives of the QIPP, responsibilities of the Team, obligations of the government, duration of the QIPP, a three-month of defect liability period and the necessary MOUs to be signed by stakeholders of each project. The Minutes of Meeting on the above was signed by the parties on 14 July 2010.

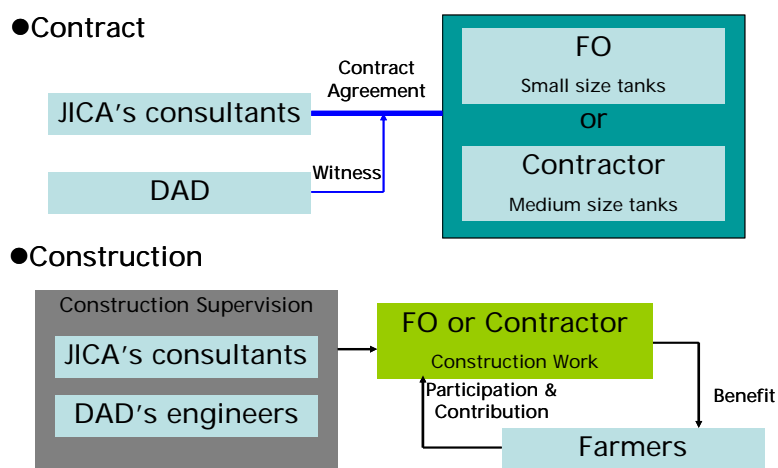
In addition to collaboration between the Team and the government, CBOs are key players of renovation works and users of the renovated facilities. Thus, the Team discussed appropriate methods and necessary parts for the renovation works with CBOs. The Team identified their needs and reflected them in the design methodology of renovation works through workshops with FOs. For instance, the Team and DAD held a workshop on 22 June 2010 inviting representatives of FOs from the target tanks. The representatives discussed their work experience concerning tank renovation, willingness, availability of human resources and equipment for construction, and other special consideration. During the workshop, the Team identified problems such as swelling due to the abnormal heavy rain in June at a few tanks and religious festivals during the construction period which may stop works for a few days. Due to these findings, the Team added drainage cost to the budget and revised the construction schedule.

For the purpose of confirmation of design and budget for target facilities, MOU 1 was signed by the concerned parties. For the renovation of irrigation tanks, all concerned FOs, DAD and the Team signed MOU 1 on 2 August 2010.

Considering the limited implementation period of the QIPP, the Team and the responsible agencies of GOSL confirmed that the procurement for the QIPP shall be done according to JICA's procurement guidelines. Based on JICA guidelines, the Team, acting as a procurement agent for and on behalf of JICA, executed the QIPP by subcontracting them with local contractors including FOs.

Figure 6- 4 shows the structure of the contract agreement for the tank renovation between the Team and contractors.





**Figure 6- 4: Contract Agreement for Tank Renovation**

A Community Contract with an FO was applied when renovation work amount was less than LKR 2 million. Only the renovation work for Vellavarayan Kulam (T14) was subcontracted to a local contractor. For construction supervision, both the Team and DAD were responsible for monitoring and supervision of construction works by the contractors.

#### 6.2.4 Construction Management

The actual construction period was longer than the planned period which had anticipated the completion of the community contract at the end of September, and the contractor contract at the end of October. The Construction Progress Chart for the tank renovation is attached in Appendix 6-3.

The renovation works for the seven minor irrigation tanks, for both the community contracts and the contractor contract, faced difficulties due to weather and the management capacity of the contractors including FOs.

##### (1) Community Contracts

The FOs, as the contractors under the community contracts started the construction work on 5 August 2010. The construction works were often hampered by heavy rains that caused earth-filling works to be halted until the rain stopped. As a result, the structural foundation works could not commence until the storm water was completely discharged from the area. The first such heavy rainfalls occurred the middle of August. The total rainfall in this period amounted to about 120mm. As a result of this rain, the water level at the tanks situated in low-lying areas such as Uppruvil Kulam (T4) and Pukkaipirai Kulam (T10) rose up enormously and it has gone down slowly since. The Team decided to change the structural material of the agricultural well for Uppruvil Kulam (T4) from random rubble masonry to concrete. The sinking of the structure into the ground was conducted by so-called the open caisson method, which requires special skills to accomplish successfully sinking of the structure to the designed depth (1.5m below ground level). This design change caused an increase in materials and subcontracting costs and

resulted in financial difficulties for the FOs at the beginning of October. After careful consideration, the Team released a part of the Final Payment in advance.

At Uchchalai Kulam (T15), shortly after commencement of the de-silting, a limestone layer was encountered when excavating the tank bed to an excavation depth of 1.5m as required under the Agreement. The excavation was done using a backhoe excavator to a depth of approximately 0.5m and then was stopped after a DAD engineer warned of the risk of seawater seepage. The expenditure for the backhoe excavator rental was for a longer period than expected until the excavation was terminated at that depth. Thus, the Team decided to reduce the quantity of the de-silting in the Contract Bill of Quantities and reallocate the saved amount for increased backhoe rentals. Furthermore, because this relatively large amount of cash expenditure in the early stage caused the FO to run into cash flow problems in the beginning of October, it could have resulted in a significant construction delay, so the Team released a part of the Final Payment in advance.

After the interim payment was made in the beginning of September, the construction progress began to fall behind schedule mainly because of sluggish progress on structural works. The FOs failed to ensure timely mobilisation of resources including masons, labourers and materials. Thus, the Team provided not only technical assistance, but also assistance for construction management in order to speed up the construction progress.

## (2) Contractor Contract

The contractor started the construction work for Vellavarayan Kulam (T14) on 20 August 2010. In the beginning, the contractor made full use of construction machinery, making good progress with earth works. However, a continuous spell of rainy weather that started from mid-September gradually hampered the construction progress. On 2 October 2010, a localised heavy rainfall occurred in the Tholpuram area and the tank was completely filled with water. The water level in the tank oddly continued to increase for the following three days, even though there was no rainfall. After careful consideration of all possible solutions and in consultation with DAD, the Team finally decided to build cofferdams at the outlet of the tank and also change the structural material of the outlet regulator from random rubble masonry to concrete, in order to complete the structural works before the actual monsoon season started. The Team also studied whether any construction items could be omitted to accommodate the costs for cofferdam and dewatering works without adjustment of the contract sum. As a result of discussion with DAD as well as FO, it was found that the paddy fields situated in the area controlled by the inlet regulator were very limited and they could be covered by the outlet regulator. The Team decided to cancel the inlet regulator work. The balance amount was allocated for repair of another lifting point that was not included in the Contract Bill of Quantities.

### (3) Handing Over and Defect Inspection

Finally, all the works for seven tanks were substantially completed by the beginning of November 2010 and the renovated tanks were officially handed over to DAD on 8 November 2010. DAD, the FOs and the Team signed MOU 2 concerning the handing over on the same day. The contractors including FOs, had a defect liability for three months after the handover.

There were some outstanding works caused by the heavy rainfall in the final stage of renovation works and small defects concerning erosion of tank bunds, sodding, and permanent signboards. The Team prepared punch lists for all tanks and requested the contractors, including FOs, to repair the listed outstanding and defect items. The contractors repaired all items by the defect inspection on 15 March 2011, although the planned inspection in February was postponed due to the high water level of the renovated tanks.

#### **6.2.5 Operation and Maintenance**

Tanks are managed by FOs, although these facilities are the property of DAD. Proper execution of the roles and responsibilities of these FOs is essential to sustainably operate and maintain the renovated facilities. Therefore, it was necessary to strengthen the capacity of FOs through the process of renovation works. The Team facilitated the FOs in enhancing their ownership and participation from the planning stage through meetings and workshops. Especially in community contracts, the Team introduced construction management tools to the target FOs for effective management and capacity building.

In the final stage of the renovation works, the Team and DAD jointly held a workshop on O&M for the renovated tanks with FOs to develop action plans for O&M. Through the workshop, the Team identified that many of FOs lost knowledge and skills for O&M such as maintenance of tank bunds and regulators, due to displacement during the prolonged conflict. Thus the Team facilitated them in raising their awareness concerning the importance and essential points of O&M. During and after the workshop, the FOs identified necessary items and consideration on O&M assisted by the Team and DAD, and prepared the action plans which included an annual O&M schedule, a monitoring check list, and prohibited practices. The O&M actions plan specified the type and frequency of O&M activities required for each tank. In addition, the FOs established an O&M committee at each renovated tank. MOU 3 including the action plan was signed by DAD, FOs and the Team at the handing over ceremony on 15 December 2010. The developed O&M manual for rehabilitated tanks is attached in Appendix 6-4.

During the defect liability period, the stakeholders found O&M issues that needed to be addressed. The Team conducted another series of workshops at the field for the FOs in March 2011 to improve their practical skills for O&M. The practical workshops included topics on repairing tank bunds destroyed by wild boars, control of inlets and outlets, and management of the O&M committee. At the same time, the Team organised leadership and accounting training for FOs to build their institutional capacity.

## 6.3 Renovation of Fishery Jetties

### 6.3.1 Target Jetties

There are seven fishing jetties in Jaffna District under DFAR. Fishing jetties in Jaffna were an important infrastructure for fishermen during and after the conflict. Fishermen were able to go fishing only from the jetties because the coastal areas were controlled by the Military Forces. The jetties were the only gateway for fishing activities for long time. The characteristics of jetties in Jaffna are summarised below:

- Main structure is made of dumped graded gravel and the side slopes are covered with larger limestone pieces.
- Slopes are covered by concrete and the top surface is covered by bitumen pavement.
- A jetty tends to have a landing area at the offshore end.
- Fishermen use a jetty when they load/unload fishing equipment to/from their boats.
- Coastline around the jetties tends to be full of mud and floating rubbish, especially in the lagoon.
- Slopes and top surfaces are damaged due to the prolonged conflict and lack of maintenance.
- There was no maintenance system by FCS for jetties, although the Military Forces mobilized FCSes to drain mud around jetties during the conflict.

The Team conducted surveys concentrating on the proposed infrastructures from DFAR in Jaffna. The DFAR submitted the list that included six jetties and three harbours to JICA. The Team reviewed the lists with the responsible officers from DFAR, and then conducted reconnaissance surveys on the jetties from the end of April to the middle of May 2010. Construction of harbour facilities was deemed to be difficult to complete before the end of the Project, considering the construction volume and necessity of EIA.

Based on the site investigation, the community profiling survey, and examination of the selection criteria and consideration including the number of fishers, risk of landmines and UXOs, necessity of EIA, construction volume, quick impact to the beneficiaries, damage level, and priority of DFAR, two jetties were selected. The selected jetties and their beneficiaries are summarised in Table 6- 7.

**Table 6- 7: Selected Jetties and Beneficiaries<sup>6</sup>**

Jetty	GN Division	Existing Structure	FCS	Members	Jetty Users
Navanturai	Jaffna West	66 m long, 3.6 m wide with landing area	St. Mary	288	288
			St. Nicholas	280	280
			Kalaivani	80	6
Kakativu	Sandilipay	60 m long, 4.4 m wide (mostly destroyed)	Chavatcaddu	850	500
			Navali	70	50
			Kakativu	100	95
			Uyarappulam	105	20
			St. Joseph	100	30

<sup>6</sup> Source: JICA Study Team

### 6.3.2 Design Policy and Concept

The design policy and concept for the jetty renovation works were based on the results of the field surveys by the Team considering the environmental and socio-economic conditions of the project areas. These renovation works aim to rehabilitate functions and structure of the existing jetties, not to extend or upgrade them. However, seriously damaged parts on the existing jetties should be demolished and properly reconstructed. The jetties in both Navanthurai and Kakativu were designed for use of fishery boats which are less than 20GT<sup>7</sup> considering the shallow depth of the lagoon.

The basic design conditions concerning tides and waves as shown in Table 6- 8, were carefully examined through data analysis by the Team and using the report “Rehabilitation of Fisheries Infrastructure Facilities in Jaffna Peninsula” prepared by Department of Civil Engineering, UOM.

**Table 6- 8: Design Conditions**

Tides	High Water Level (HWL): +0.8 m Low Water Level (LWL): +/-0.0 m
Wave	Design wave height is assumed to be smaller than 1.0 m based on the UOM report.
Current	Current Speed=1 knot
Temperature	31.2 (max) to 25.0 (min) on average from 1951 to 1980
Rainfall	1,231mm/year on average from 1961 to 1990
Objective Fishery Boat	Less than 20 GT

#### (1) Design Crest Level

Design crest level was calculated based on the Design Standard for a Fishery Harbour in Japan. A tide range of 0 – 1.0m and a GT less than 20 for fishery boats, were applied to the following Table 6- 9.

**Table 6- 9: Crest Level of Jetty<sup>8</sup>**

Tide Range (HWL-LWL)	Objective Fishery Boat (GT)			
	0~20 GT	20~150 GT	150~500 GT	> 500 GT
0 m ~ 1.0 m	0.7 m	1.0 m	1.3 m	1.5 m
1.0 m ~ 1.5 m	0.7 m	1.0 m	1.2 m	1.4 m
1.5 m~ 2.0 m	0.6 m	0.9 m	1.1 m	1.3 m

$$\begin{aligned} \text{Design Crest Level} &= \text{HWL (0.8m)} + \text{Figure from Table 6- 9 (0.7m)} \\ &= 1.5\text{m above LWL} \end{aligned}$$

#### (2) Mass of Armour Stones

To ensure durability against waves, the Team employed an armour stone structure using granite stone for the slope instead of concrete-covered slope. The required mass of armour units on the slope was calculated using the Hudson formula with a stability number, based on “Technical Standards and Commentaries for

<sup>7</sup> In fact, most of the fishing boats operating in the Jaffna lagoon are less than 4 GT.

<sup>8</sup> Source: Design Standard for the Fishery Harbour in Japan

Port and Harbour Facilities in Japan”. As the result of the calculation, the required mass of armour stone for this Works was determined to be 50 – 100Kg.

(3) Typical Cross Section

Based on the above-mentioned calculations, the typical cross section for the jetty renovation works was designed as shown in Figure 6- 5.

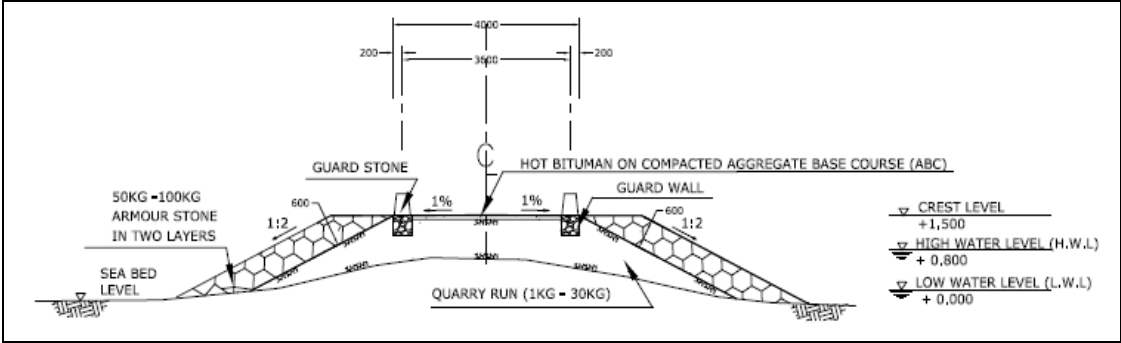


Figure 6- 5: Typical Cross Section of Jetty

(4) Removal of Mud / Sludge

Since both Jetties in Navanthurai and Kakativu have not been maintained for a long period because most of the coastlines of Jaffna peninsula were designated as HSZ during the conflict period, mud / sludge sediment has accumulated on the sea bed along the jetties. These deposit hindered both the renovation works and fishing boats approaching the jetties. Thus, dredging of sediment within a 10m area from the designed embankment lines was planned during the renovation works.

(5) Designed Facilities and Drawings

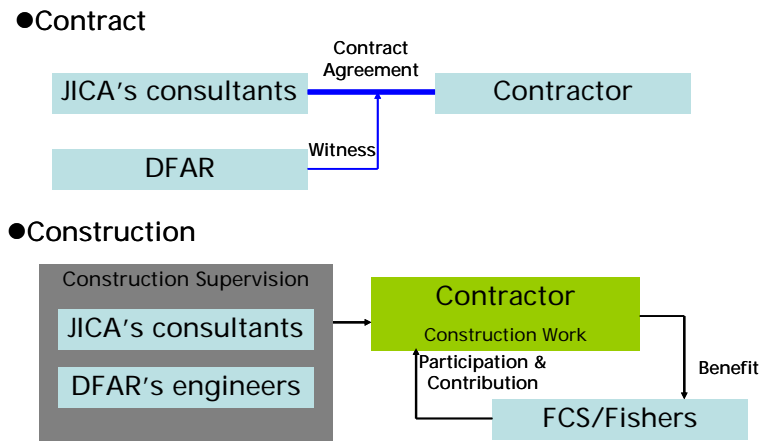
The final as-built features of the renovated fishery jetties are shown in Appendix 6-2.

6.3.3 Institutional Arrangement

The Team and responsible agencies of GOSL including GA, and Assistant Director of DFAR have discussed and reached a consensus concerning the implementation of the QIPP through the same process as the tank renovation works.

In addition to collaboration between the Team and the government, FCSes are key players of operation and maintenance of the renovated facilities. Thus, the Team discussed appropriate methods and necessary parts for the renovation works with the FCSes. The Team identified their needs and reflected them in the design methodology of renovation works through workshops with the FCSes. For instance, steps for landing purpose were included in the design upon a request from the FCSes. For the purpose of confirmation of design and budget for target facilities, MOU 1 was signed by the concerned parties.

Figure 6-6 shows the structure of the contract agreement for the jetty renovation between the Team and a contractor. For construction supervision, both the Team and DFAR were responsible for monitoring and supervision of construction works by the contractor.



**Figure 6- 6: Contract Agreement for Jetty Renovation**

### 6.3.4 Construction Management

Thanks to the efficient works by the contractor, the actual construction period was shorter than the planned period which had anticipated completion at the end of December 2010. The Construction Progress Chart for the jetty renovation is attached in Appendix 6-3.

#### (1) Construction Works

All necessary permissions for the construction work were obtained in a timely manner in cooperation with DFAR and other relevant authorities. According to the contract agreement with the contractor and original implementation plan, construction labourers from local communities were to be employed for the QIPP. Since the structure of the two jetties was new to the Jaffna region and special construction skills were required, it was difficult for the contractor to employ workers (excluding the security guards) from the neighbouring communities.

Although sudden restriction of procurement of aggregate and heavy rains disturbed the construction works, it was within expectations so the construction work could be carried out without serious delay. Quality control, as stipulated in the technical specifications, was well maintained, and all required inspections were made in a good manner. All construction works including site cleaning, dredging works, core stone works, armour stone works, guard wall works and pavement works were completed by 18 December 2010, although there were some outstanding items to be completed after the rainy season due to high tide level of the lagoon.

#### (2) Handing Over and Defect Inspection

The renovated jetties were officially handed over to DFAR on 19 December 2010. For the purpose of clarification of responsibilities of each stakeholder, DFAR, the Contractor and the Team signed MOU 2 concerning the handing over on the same day. The Contractor had a defect liability for three months after the handover.

There were some outstanding works regarding mason works for stairways, defects in slope rectification works of armour stones and guard stone repairing. Regarding the slope, it was identified at the meeting between the Team and FCSes that the gaps among armour stones might be dangerous for fishermen using the jetty. The Team prepared punch lists for all jetties in cooperation with the Contractor, and requested the contractor to rectify the listed outstanding and defect items. The contractor repaired all items by the defect inspection on 17 March 2011.

### **6.3.5 Operation and Maintenance**

Jetties are used and managed by FCSes, although these facilities are the property of DFAR. Proper execution of the roles and responsibilities of FCSes is essential to sustainably operate and maintain the renovated facilities. Therefore, it was necessary to strengthen the capacity of FCSes through the process of renovation works. The Team facilitated FCSes to enhance their ownership and participation from the planning stage through meetings and workshops.

The Team discussed the O&M action plan for the renovated jetties with DFAR and FCSes through meetings and workshops. The O&M committees for two jetties were established with the participation of FCSes' representatives. Also, the O&M action plans were developed by responsible FCSes facilitated by the Team and DFAR at the first workshop in February 2011, then revised at the second workshop in March 2011. The developed O&M manual for rehabilitated jetties is attached in Appendix 6-5. The action plans included efficient usage of jetty by the fishermen, prohibited activities, removal of sludge, and repairing damaged facilities. As a part of the action plan, FCSes set used tires on the stairways to prevent boat crashes. Finally, MOU 3 including the action plan was signed by DFAR, FCSes and the Team in March 2011. After the O&M workshop, the Team organised leadership and accounting training for FCSes to build their institutional capacity.

## **6.4 Evaluation of Quick Impact Pilot Projects**

### **6.4.1 Outcomes**

#### **(1) Renovation of Minor Irrigation Tank**

The renovation works recovered proper function of the minor irrigation tanks. Examples of renovation works are shown on page P-2 of this Report. As the result of the renovation work, the storage capacity of each tank was increased as shown in Table 6- 10. The total storage capacity after the renovation works is 45,747m<sup>3</sup>. The storage capacity increased by 83% after the renovation, although the Team estimated a 41,910m<sup>3</sup> or 69% increase prior to the renovation works. This outcome is more than expected. This capacity increase will contribute significantly to improved fresh groundwater recharge and fresh water availability for increased agricultural production of 340 tank users directly. Regarding Uchchalai Kulam (T15), its direct beneficiaries have increased day by day due to the resettlement of returnees in the area.



**Table 6- 10: Direct Benefits of Tank Renovation<sup>9</sup>**

Tank No.	Tank Name		Tank Bund Length (m)	F.S.L Elevation (m)	Tank Bed Elevation (m)	Depth (m)	F.S.L Area (m <sup>2</sup> )	Storage Capacity (m <sup>3</sup> )	Increased Capacity	Direct Beneficiaries (tank users)
4	T4 Uppruvil	Before	152	4.100	3.100	1.00	901	361		30
		After		4.950	2.210	2.74	1,175	1,288	927	
8	T8 Vannan	Before	293	8.400	6.470	1.93	5,237	4,043		60
		After		9.570	6.100	3.47	5,764	8,000	3,958	
10	T10 Pukkaiyan	Before	347	3.900	3.010	0.89	6,882	2,450		50
		After		5.015	3.010	2.01	7,507	6,021	3,570	
11	T11 Varakaipirai	Before	179	8.600	7.770	0.83	1,498	497		70
		After		10.100	6.880	3.22	1,820	1,977	1,480	
14	T14 Vellavarayan	Before	1,170	9.500	8.500	1.00	17,872	7,149		30
		After		9.900	8.000	1.90	19,978	15,183	8,034	
15	T15 Uchchalai	Before	132	9.500	8.510	0.99	1,020	404		50
		After		10.750	8.000	2.75	1,258	1,384	980	
17	T17 Sangaththakerni	Before	481	8.930	6.190	2.74	9,272	10,163		50
		After		9.300	6.190	3.11	9,561	11,894	1,731	
	Total	Before	2,754					25,066		340
		After						45,747	20,681	

For outcomes concerning community and contractor contracts, the renovation works benefited 2,343 FO members and neighbours. One benefit of renovation works under the community contract was capacity building of FO members through the process of construction management and developing operation and maintenance plans. Another benefit was income generation for villagers and IDPs/returnees as construction labourers. Table 6- 11 summarises the number of labourers for the renovation works.

**Table 6- 11: Labourers for the Tank Renovation<sup>10</sup>**

Tank No.	Tank Name	Name of FO	Total Labour Man/Day	Female Man/Day	IDP Man/Day
T4	Uppuruvil Kulam	Madduvil Centre	1,321	0	54
T8	Vannan Kulam	Vellampokkaddi	479	0	26
T10	Pukkaiyan Kulam	Nunavil West	414	308	176
T11	Varakaipirai Kulam	Puttur East	1,188	0	439
T14	Vellavarayan Kulam	Sulipuram	920	401	54
T15	Uchchalai Kulam	Ilaivalai North	541	45	97
T17	Sangaththakerni Kulam	Velanai South	716	283	243

The renovation works mobilised 5,579 Man/Day workers during the construction period. Those labourers earned cash amounting to more than LKR 3.3 million, assuming the labour cost per day was LKR 600 on average.

## (2) Renovation of Fishery Jetty

The renovation works restored the proper function of the jetties. Pictures taken before and after the renovation works are shown on page P-2. As a result of the renovation work, a total of 1,269 fishermen as jetty users, including returnees, received the benefit of the renovation and can use the jetties conveniently. The breakdown of beneficiaries is summarised in Table 6-12.

<sup>9</sup> Note: Storage Capacity is calculated using a formula:  $V=0.4 \times \text{depth} \times \text{Area of FSL}$ . The number of beneficiary: Community profiling survey by the JICA Study Team. Source: JICA Study Team

<sup>10</sup> Source: JICA Study Team

**Table 6- 12: Beneficiaries of Jetty Renovation<sup>11</sup>**

Jetty	FCS	Members	Breakdown of Members		
			Female	Returnee/IDP	Jetty Users
Navanturai	St. Mary	288	0	0	288
	St. Nicholas	280	0	32	280
	Kalaivani	80	0	15	6
Kakativu	Chavatcaddu	850	87	104	500
	Navali	70	30	0	50
	Kakativu	100	0	40	95
	Uyarappulam	105	4	15	20
	St. Joseph	100	15	14	30

## 6.4.2 Evaluation Results

### (1) Framework of the QIPP

PDP Jaffna is the first technical cooperation by JICA in Jaffna District in the past few decades because of the conflict in Sri Lanka. The Team, as well as JICA did not have a wealth of aid experience in Jaffna, although some of the team members have rich experience in other regions of Sri Lanka. It was a struggle to perform efficient work in Jaffna. The Team learned lessons from its assistance activities and from simultaneous and continuous feedbacks on its activities. Specifically, the result of the QIPP was to learn lessons through preparation and implementation regarding the capacity of CBOs and local contractors, procurement of construction materials, and natural conditions. Although the QIPP also performed as a learning process, the primary objective of the projects was to restore damaged facilities to improve livelihood activities of beneficiaries. The Team developed a simple logical framework as shown in Table 6-13, to monitor and evaluate the QIPP.

**Table 6- 13: Simple Logframe for the QIPP<sup>12</sup>**

Project Type	Outcomes	Indicators	Activities
Renovation of Minor Irrigation Tanks	1. Original function of the 7 tanks is recovered. 2. Lessons learned	- The tanks are renovated with local quality standards - Water retention capacity of the tanks is increased - The number of beneficiaries (farmers) - Productivity of the beneficiaries is improved - Capacity of O&M of the FOs is improved	- Construction works for 7 tanks - On the Job Training for construction workers - Training on O&M
Renovation of Fishery Jetties	1. Original function of the 2 jetties is recovered. 2. Lessons learned	- The jetties are renovated with local quality standards - The number of beneficiaries (fishermen) - Users of the jetties are increased - The number of beneficiaries who are satisfied with the renovated jetties - Capacity of O&M of the FCSes is improved	- Construction works for 2 jetties - Training on O&M

### (2) Relevance

The relevance of the QIPP was high. For the purpose of quick recovery of infrastructure for livelihood activities, small irrigation tanks and fishery jetties were essential facilities for farmers and fishermen. DAD and DFAR recognised that both renovation works were highly prioritised issues in the sectors.

<sup>11</sup> Source: JICA Study Team

<sup>12</sup> Source: JICA Study Team

### (3) Effectiveness and Impacts

Effectiveness of the renovation works was high. As described above, all facilities were successfully renovated resulting in better than local quality standards. Also, functions of the renovated facilities were recovered. The renovated small irrigation tanks are able to recharge underground water for the areas longer period than before. The renovated jetties can be used by fishermen for their daily fishing activities. The Team conducted an interview survey to the counterparts and a questionnaire survey on the evaluation of the QIPP to the beneficiaries in July 2011<sup>13</sup>. According to the results of the surveys, most of the indicators for the outcome of the QIPP were achieved as shown in Table 6- 14.

**Table 6- 14: Achievement of Indicators<sup>14</sup>**

Indicators	Evaluation Results
<i>Small Irrigation Tank</i>	
The tanks are renovated with local quality standards	<ul style="list-style-type: none"> <li>- All renovation works for 7 tanks passed the final inspection and the defect inspection by DAD and PDP-Jaffna.</li> <li>- DAD was satisfied with quality of the renovation works.</li> <li>- 85% of the tank users were satisfied with quality of the renovation works.</li> </ul>
Water retention capacity of the tanks is increased	<ul style="list-style-type: none"> <li>- The storage capacity increased by 83% after the renovation (more than the planned capacity 69%).</li> <li>- 83% of the tank users answered that duration of water supply using the renovated tank was extended.</li> <li>- 85% of the tank users answered that groundwater level of surrounding areas of the renovated tank was increased.</li> </ul>
The number of beneficiaries (farmers)	<ul style="list-style-type: none"> <li>- More than the planned number (340) of tank users due to the resettlement of returnees.</li> </ul>
Productivity of the beneficiaries is improved	<ul style="list-style-type: none"> <li>- DAD recognised that productivity of the beneficiaries was improved.</li> <li>- 75% of the tank users answered that productivity of paddy/crops was increased.</li> <li>- 73% of the tank users answered that variety of crops was increased.</li> </ul>
Capacity of O&M of the FOs is improved	<ul style="list-style-type: none"> <li>- All FOs established O&amp;M committees.</li> <li>- All FOs developed O&amp;M Action Plan assisted by PDP-Jaffna.</li> <li>- More than 75% of the tank users answered that FO's activity (75%) and communication (83%) were improved.</li> <li>- 65% of the tank users evaluated that FO's maintenance activity was excellent or good.</li> </ul>
<i>Fishery Jetty</i>	
The jetties are renovated with local quality standards	<ul style="list-style-type: none"> <li>- All renovation works for 2 jetties passed the final inspection and the defect inspection by DFAR and PDP-Jaffna.</li> <li>- DFAR was satisfied with quality of the renovation works.</li> <li>- 98% of the jetty users were satisfied with quality of the renovation works.</li> </ul>
The number of beneficiaries (fishermen)	<ul style="list-style-type: none"> <li>- Same as planned value</li> </ul>
Users of the jetties are increased	<ul style="list-style-type: none"> <li>- Same as planned value</li> </ul>
The number of beneficiaries who are satisfied with the renovated jetties	<ul style="list-style-type: none"> <li>- DFAR recognised that most of the beneficiaries were satisfied with the renovated jetties.</li> <li>- 89% of the jetty users answered that boat landing at the renovated jetty became much easier.</li> <li>- 73% of the jetty users answered that quiet area protected by the renovated jetty was increased and damage by tidal waves was expected to be mitigated.</li> </ul>
Capacity of O&M of the FCSes is improved	<ul style="list-style-type: none"> <li>- The O&amp;M committee was established at each renovated jetty.</li> <li>- The O&amp;M Action Plan was developed for each renovated jetty assisted by PDP-Jaffna.</li> <li>- 92% of the jetty users answered that FCS's activity was improved.</li> <li>- 84% the jetty users evaluated that FCS's maintenance activity was excellent or good.</li> </ul>

<sup>13</sup> Questionnaires were distributed to the beneficiaries consisting of 340 tank users and 1,269 jetty users. Collection rates were 50.9% for tank users and 29.8% for jetty users respectively.

<sup>14</sup> Source: JICA Study Team

#### (4) Specific Aspects of Post-conflict Setting

The positive impact of generating income for farmers and neighbours was observed in the labour intensive tank renovation works. Approx. 67% of beneficiaries of the tank renovation works answered that the works contributed to income generation of farmers. The jetty renovation works, on the other hand, did not contribute to employment generation in the local community, because local labourers could not fulfil the qualifications for construction workers for the works. Nevertheless, both beneficiaries of the renovated facilities were satisfied with the renovation works for improvement of their livelihood activities.

Coverage of the QIPP was limited. Only seven tanks and two jetties were renovated. Local authorities were not satisfied with the numbers because due to time and budgetary limitation of PDP Jaffna, the actual number was fewer than their original request. Although the number was below the expectations of the local authority, the Team and counterparts selected the limited number of project sites considering the geographical balance and concrete selection criteria had had sufficient accountability. There were no complaints or criticisms against PDP Jaffna concerning the selection of the QIPP.

Similar to quick impact type projects after conflicts or natural disasters, the Team did not secure sufficient time for building capacity of CBOs on construction management and O&M due to the limited period of the QIPPs. Especially in the tank renovation works under community contracts, the first priority was the completion of renovation works before the rainy season considering quick impacts. The Team accelerated the renovation works by introducing machinery and by assisting CBO's management, and did not take enough time for capacity building of the CBOs. Thus, the Team tried to build the capacity of CBOs through workshops on O&M, leadership and accounting after the completion of renovation works. This training provided a good opportunity for them to rethink their roles and responsibilities. In addition, the Team assisted the O&M efforts of the CBOs in the monitoring and evaluation process. This assistance could gradually strengthen their institutional capacity.

Although the scale and coverage of the renovation works was limited, promptness of the renovation works with sufficient quality was remarkable when compared with similar donor funded projects. The renovation works were published positively in the local media. This was a good opportunity for people in Jaffna to feel peace dividends and feel positively about JICA's assistance.

#### **6.4.3 Lessons Learned from Quick Impact Pilot Projects**

The QIPP brought positive impacts to the beneficiaries, although the urgent rehabilitation works have limitations in satisfying both labour intensive needs and quality of work. The renovated minor irrigation tanks did store sufficient water before the end of the rainy season. In addition, the renovated jetties could be used immediately after the rainy season. Both renovation projects are visible and brought quick benefits to the users. The Team identified notable lessons from the implementation of the QIPP, including difficulties of implementation of construction projects in Jaffna District and appropriateness of methods for quick impact projects as a donor funded project.

## (1) Challenges for Construction Projects in Jaffna

### 1) Contractors in Districts in Northern Province

The contractors in Northern Province were not involved in construction projects during the prolonged conflict. Thus, they have a serious lack of overall construction management skills. In fact, even the major contractors who have a higher ICTAD grade are suffering from limited basic technical knowledge and site activities.

### 2) Capacity of FOs concerning Community Contract

Although many FO members were responsible and active in tank renovation works, the management capacity of FOs under the community contracts tended to be insufficient. It seems that communication and information sharing among members of FO does not function well due to repeated displacement of people during the conflict period. Also, community mobilisation and financial arrangement by FOs for the progress of construction were weak. Many FO members were interested in the renovation of minor irrigation tanks that were linked to their own land but it was difficult for the renovation works to be implemented only by direct beneficiaries of the target tank. Thus, FOs needed to hire labourers not only from the beneficiaries but also from other FO members and labourers outside of the community who would work for money rather than obligation as a community member. This caused difficulty in construction management by FOs once the FOs faced cash flow problems.

### 3) Capacity of Local Authorities concerning Renovation Works

There are capable administrative and technical officers in DAD and DFAR. However, they were not always available for the renovation works, because they were very busy and the number of technical officers was limited. Therefore, the Team employed private engineers to supervise the renovation works instead of involving government officials in the process. The low fulfilment of cadre for government officers in Jaffna District and the lack of budget are serious issues that hinder efficient and effective renovation works.

## (2) Appropriateness of Methods for the QIPP

### 1) Labour Intensive Rehabilitation

Urgent rehabilitation using labour intensive methods can generate income for people including returnees, IDPs and other vulnerable groups who were affected by the conflict. However, labour intensive methods have the limitation of quality control of construction works within a limited period. The jetty renovation could not employ this method, because most of the works were done using construction equipment operated by skilled labourers. Although tank renovation work is suitable as labour intensive work, the Team introduced FOs to the use of construction equipment such as backhoe excavators due to the short construction period.

## 2) Reasonable Adjustments and Appropriate Technical Assistance

Allowing reasonable adjustments to the drawings and/or specifications based on sound engineering judgment is the key to a successful completion of rehabilitation works of minor irrigation tanks. For instance, the soil available in/around the tank bed was not suitable for earth-filling work due to its cohesiveness and/or in some cases non-cohesiveness. The purpose of the structure was not designed as a water retaining structure with heavy live load on it, so the water level of the tank would not rise above the existing ground level except in extreme conditions like complete flooding. Although small-scale depressions are expected on the tank bund over time, they can be easily filled in. Thus, the Team decided to allow FOs to form the tank bund using only the soil of the tank bed. This resulted in the significant reduction in the cost of the earth works and allowed for greater flexibility for design changes.

## 3) Construction Timing

Minor irrigation tanks were renovated during the agricultural off-season and rainy season. Before the rainy season, it was appropriate and easy to mobilise farmers as labourers; construction in the early rainy season was inappropriate for mobilising farmers due to their paddy cultivation. Furthermore, it was difficult to conduct even structure works in the rainy season. Considering the fishing activity, the best timing for renovation of the jetties is during the rainy season. However, heavy rain and resulting high tides in the Jaffna lagoon negatively affected the construction work.

## 4) Safety Management

Fortunately, no serious accidents occurred during the QIPP. The Team ensured safety management to the contractors through the safety workshops and daily supervision. However, the contractor as well as FOs tended to be lax in intention and practice on safety issues. Safety management in construction works should be emphasised to contractors and stakeholders considering the risks of landmines and UXOs as well as insufficient emergency medical services in Jaffna.

## 5) Continuous Assistance after the Completion

Although the Team did not secure sufficient time for building capacity of CBOs on construction management and O&M due to the limited period of the QIPP, the Team tried to build the capacity of CBOs through workshops on O&M, leadership and accounting, after the completion of renovation works. This assistance provided a good opportunity for the CBOs to rethink their roles and responsibilities, although they need repeated training to strengthen their institutional capacity. Also, the Team assisted their O&M efforts through the monitoring and evaluation process. For instance, the Team proposed FCSes to set used tires on the stairways of jetties to prevent fishing boats from crashing on the concrete steps. FCSes agreed to install tires on the jetties and placed them by themselves with technical assistance from the Team. For the tank renovation, the Team assisted FOs to install safety signboards to prevent water accidents and staff gauges for checking the water level. Additionally, the Team provided sodding guidelines for effective turfing on tank bunds.

### (3) Recommendations for Future Action

#### 1) For CBOs

CBOs in Jaffna have good potentials of managing community based renovation works such as small irrigation tanks and mobilising their members to community works, although they lost organisational functions and individual skills due to the prolonged conflict. The QIPP provided opportunities to empower the CBOs through the renovation works and the workshops. It is necessary for them to facilitate members not only for O&M activities of the renovated facilities continuously, but also for other community based livelihood activities. Collaboration among CBOs (e.g. O&M of the renovated jetties by concerned FCSes), in addition, is important for sharing information among them and optimising use of limited resources for their livelihood activities.

#### 2) For Local Public Service Providers

Lack of cadre and practice of construction works in Jaffna District hampered effective support of local officials, or local public service providers, to the population in construction and O&M of livelihood facilities. It is necessary for them to engage more construction projects funded both by donors and by the government. For the purpose of that, the GOSL needs to deploy more government officials to the cadre in Jaffna District. Officers of local government institutions, on the other hand, need to collaborate with CBOs in rehabilitation and development activities in Jaffna, considering the limited manpower of local government and revitalising CBOs in Jaffna. The resources of CBOs including human resources and skills are a driving force for the rehabilitation and development. District level public servants, including Divisional Officers of DAD and Fishery Inspectors of DFAR, who are working CBOs closely in the field, have potential in facilitating the CBOs. Naturally, however, they need to learn facilitation skills for effective community mobilisation.



**Chapter 7**  
**Implementation of Pilot Projects**



## **Chapter 7 Implementation of Pilot Projects**

### **7.1 Introduction**

#### **7.1.1 Background**

Since the first presentation of the Project's inception report at Jaffna's GA Office in April 2010, the Team had been identifying a number of development interventions necessary now in the district and working out plans of Pilot Projects to give a tangible form to the identified interventions or at least to parts of them. The Team endeavored to identify meaningful pilot projects through every available opportunity. As a result of these activities, the Team gathered a number of ideas about interventions and the Pilot Projects associated with the interventions. They were examined and cross-examined through vigorous joint efforts among the Team, concerned Departments and institutions, NGOs, international donors and, at times, beneficiaries. This process will be elaborated in the following section 7.2.

Subsequently, PDP Jaffna come to the implementation of the 17 pilot projects – six in agriculture, another six in fisheries and five in community development. The details of the individual projects are found later in this chapter.

The Pilot Projects provided not only test grounds for new technology and appropriate technology but also opportunities to gauge the organizational capacity level of concerned CBOs and public service providers and to plan effective measures for their improvement. Lessons learnt through the implementation of the Pilot Projects are reflected in the Road Maps presented in Chapter 9.

This chapter will explain about the identification and implementation of the Pilot Projects, including prioritization of a seemingly limitless list of desired development interventions in Jaffna District. The Chapter 8 will report in details the monitoring and evaluation of the Pilot Projects as well as lesson learnt from their implementation. Chapter 9 will reflect the essence of the lessons learnt in formulating the Road Maps.

Before detailed discussion on this matter, a note should be taken here to avoid confusion concerning the use of word "community." The Pilot Projects are often called "community pilot projects" as they are basically intended to benefit rural community people and CBOs are always involved.

The word "community" used here may be taken to imply that the activities of a pilot project will be carried out on a small scale within a specific community. This impression is mistaken; meeting community development needs which are normally scattered over a myriad of communities of the region more often than not requires some key interventions outside the needy communities. In other words, because any serious development issue is intrinsically complex, development projects addressing the issue, with little exception, must be perceived in a dynamic and integrated manner, rather than a static and isolated manner.

In particular, when projects intended to help uplift people suffering the post-conflict devastation and destitute from the humanitarian aid stage, which is required during and immediately after the conflict, to the developmental stage thereafter, the projects ought to address a combination of factors in community; they embrace technical, social and institutional dimensions in addition to adjustments to macro-economic realities.

Let us stop here a seemingly metaphysical discussion and instead refer to a concrete example in Jaffna: coconut. For the people of Jaffna, likewise in the rest of the country, coconut is an essential ingredient to cook curry and other local dishes, and thus they need coconut literally every day. An average family spends at least LKR 30 for coconut per day.

Local coconut production has declined over the conflict period as many trees were cut for conflict purposes, and little efforts were made for replanting standing trees. As a consequence, the present level of local coconut production has decreased to a level equivalent to only 20-30% of the local consumption; the remainder is brought from other districts, with considerable transportation costs.

Farmers know well that, if they have a few young and productive coconut trees, they can earn a respectable and steady income. The market exists right here and no particular effort is required to sell coconuts. They also know that naturally regenerated young coconut in their garden is not an ideal coconut to grow; only a professional nursery can supply genetically superior coconuts to them.

Replanting coconut is a need we have heard repeatedly in many communities. However, the fundamental solution to the issue always reckons a steady supply of good seedlings, which in turn requires a drastic improvement in the production capacity of big coconut nurseries, particularly one owned by CCB. Obviously, there is always something farmers can do to raise coconut productivity in their gardens – put more fertilizer, for instance, but the primary bottleneck is the supply of quality coconut seedlings from nurseries to growers.

Offshore fisheries development can be used as another anecdote. Some fishermen and fishing boat owners are already willing to venture into offshore fisheries with a multi-day boat, reflecting the reality that not much room remains to expand production in Jaffna's coastal water. However, offshore fisheries development requires a considerable infrastructure to accommodate larger boats and supply them with needed inputs such as fuel and ice in a systematic manner. Obviously, the construction of the infrastructure demands a huge financial resource and thus a dynamic sector-wide planning is necessarily accompanied. In doing so, not only engineering aspects but also economic, managerial and environmental consideration must be thoroughly examined. In other words, a dynamic and broad-based approach, which is considerably different from coastal fisheries development, is always required outside the framework of coastal fisheries.

These examples illustrate that, although a typical community need is to augment coconut production in backyards of many Jaffna farmers, it can be achieved only through a regional (for example district-wide) approach. The same is true for farmer education and training, for improved product marketing, for institutional strengthening of farmers' organization, for coastal fisheries management, for aquaculture development, and for the reforestation of barren land, to mention a few. This encourages us to plan development interventions not just in a narrow community context but in a larger perspective and probably more often in the combination of these two.

The recognition above is critical in Jaffna where some developmental issues have emerged not because of the lack of development but because of the abundance of imbalanced development. Coastal fisheries are a case in point. Although many fishermen and would-be fishermen are still eager to be independent by owning his fishing boat and gear, an ever-increasing fishing population here suggests the increased fishing efforts are unsustainable in the near future. Then it is now necessary to introduce a fisheries management system instead of the continued supply of new boats and gear. Only a successful fisheries management system can prevent a future catastrophe and the resultant impoverishment in fishing communities. This thought should be adequately reflected in the process of the identification and implementation of the pilot project in the fisheries sector.

#### **7.1.2 Method of Target Area Selection**

Owing to time and other constraints of the Project, out of 11 DS Divisions within the district, the five DS Divisions were selected for the implementation of the Pilot Projects. The selection criteria included the following: 1) higher number and percentage of IDPs in the Division, 2) greater need for socio-economic development and rehabilitation of community infrastructure, 3) areas designated by the relevant authorities as possible sites for tank and jetty rehabilitation (priority would be given to these areas), and 4) easy access from Jaffna Town (i.e., places located within 1 hour away and requiring no boat trip).

In considering the above criteria, the Team developed a scoring method based on the indicators below, which prioritized the target DS Divisions. These indicators included 1) the total number of IDPs, 2) the percentage of IDPs, 3) the percentage of the population receiving dry rations, 4) the number of farm families, 5) the number of village irrigation schemes requested by DAD, 6) the number of fishing families, and 7) the number of jetties proposed for rehabilitation by DFAR. The result of the scoring is shown in the table below.

**Table 7- 1: Results of the Scoring of Indicators from the Basic Survey<sup>12</sup>**

Indicators	Delft	Velanai	Kayts	Valanthalai	Jaffna	Thirunelvely	Sandilipai	Chankanaikai	Uduvil	Tellippalai	Kopay	Chavakachcheri	Karaveddy	Point Pedro	Maruthankerney
1. Number Resettled		1					2				3	5		4	
2. Ratio of Resettled		4		3								1		2	5
3. Raio of Dry Ration			5						1	2				3	3
4. Number of Farm Families							2	3			5	4	1		
5. Requested Tank Schemes		4									3	5			
6. Number of Fishing Families		1	2		5		3							4	
7. Requested Jetty Schemes					5									4	
<b>Total Score</b>	<b>0</b>	<b>10</b>	<b>7</b>	<b>3</b>	<b>10</b>	<b>0</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>15</b>	<b>1</b>	<b>17</b>	<b>8</b>

For detailed scoring data, please refer to Appendix 7-1: Results of the Scoring. As results indicate, the DS Divisions of Point Pedro, Chavakachcheri, Kopay, Velenai, and Jaffna scored highly. These five DS Divisions possessed the geographic and other characteristics needed to represent areas within Jaffna District.

### 7.1.3 Special Features of the Selected DS Divisions

#### (1) Point Pedro DS Division

Point Pedro had population of 53,724 (8% of the total) and the second highest number of IDPs (10,024) in the district. Returnees/IDPs thus constituted 19% of the division's total population. The ratio for those receiving dry food rations was 21%, which was the third highest in the district. Since Point Pedro faced the Indian Ocean, it played an important role in representing deep-sea fishing potential. Point Pedro had the second largest number of fishing families (3,045) and the highest number of FCS (20) in the district. The DFAR requested the rehabilitation of two jetties and the construction of a harbour, illustrating the DS's priority for the district's fishery development. The divisions with similar potential included Maruthankarny, Tellippalai, Sandilipai, and Chankanaikai.

#### (2) Chavakachcheri DS Division

Chavakachcheri had a population of 74,453 (10%) and the district's highest number of IDPs (12,355). It primarily represented low-lying agriculture, paddy cultivation, and coconut production, and the fact that Chavakachcheri had the largest area means it possessed different geographical characteristics. Among the DS Divisions, Chavakachcheri had the second largest number of farm families (12,544), with the largest gross paddy harvest (2,522 hectare, *Maha* 2007/08) in the district. The DAD's request for rehabilitation of irrigation schemes was more substantial for this division than for any other. The division most similar to Chavachcheri in regard to agriculture may be Velenai, though Chavachcheri

<sup>1</sup> Points are allotted to a DS Divisions in respect to each indicator on a scale of 5 to 1. The most qualified Division receives 5 points, and those less qualified receive points in descending order from 4 to 1.

<sup>2</sup> Source: The TeamOriginal data was drawn from Project Director of Rehabilitation Secretariat, GA Office (for IDP), Jaffna District Statistical Information 2009 (for farm and fishing families), DAD, Jaffna (for requested tank), DFAR, Jaffna (for requested jetty)

could also be compared to areas in the Kilinochchi and Mullaittivu Districts, where paddy cultivation was active.

(3) Kopay DS Division

Kopay had a population of 77,049 (13%), with the third largest number of IDPs (7,175). Its numbers of farm families (12,650) and agro labourers (6,830) were the highest in the district. Kopay was characterized by vegetable and fruit cultivation as well as lift irrigation for its highland terrain. Its yields of red onions (1,626 million tons) and Manioc (1,635 million tons) were also highest in the district. Kopay shared its highland agriculture characteristics with Uduvil.

(4) Velanai DS Division

Velanai had a population of 18,729 (2%) with 5,463 IDPs, and a ratio that marked the second highest (29%) in the district. The number of farm families (1,580) and fishing families (1,108) were about the same. Valanai’s score in terms of the request of DAD for the rehabilitation of irrigation tanks was the second highest, and it had the island characteristics commonly found among Kayts, Karanagar, and Delft.

(5) Jaffna DS Division

Jaffna had a population of 55,134 (9%), with 5,057 IDPs/returnees. It comprised several ethnicities, including Sinhalese, Indian Tamil, and Sri Lankan Moor (Muslim), though the majority were Sri Lankan Tamil. The major religion was Christianity (52%), followed by Hinduism (47%), and Islam (1%), whereas the majority in all other selected divisions practiced Hinduism. Jaffna included the largest number of fishing families (3,485), and it received the most substantial DFAR requests for jetty rehabilitation. Jaffna was a well-developed urban area, and many of its characteristics were shared with the adjoining Nallur DS Division.

The table below summarizes the geographic characteristics of the selected DS Divisions.

**Table 7- 2: Summary of Geographic Representation of the Selected DS Divisions<sup>3</sup>**

<b>Geographic Characteristics</b>	<b>DS Divisions/Other Districts</b>
Deep sea fishing potential	<b><u>Point Pedro</u></b> , Maruthankarny, Tellippalai, Sandilipay, Chankanai
Low-lying agriculture	<b><u>Chavakachceri</u></b> , Velanai, Kilinochchi District, Mullaittivu District
Highland agriculture	<b><u>Kopay</u></b> , Uduvil
Island area	<b><u>Velanai</u></b> , Kayts, Karanagar, Delft
Developed urban area	<b><u>Jaffna</u></b> , Nallur

<sup>3</sup> Note: the names of the Selected DS Divisions are in bold and underlined.

## 7.2 Identification and Concept Development of Pilot Projects

Table 7- 3, Table 7- 4, and Table 7- 5 list all the identified and scrutinized pilot projects in agriculture, fisheries and community development. In the agriculture sector, the total number of pilot projects put on screening was over 20, out of which the Team recommended the implementation of the nine projects (or at least parts of the individual projects) from A-1 up to A-9. Meanwhile, the Team had serious reservation about the projects tagged A-20 and over, due to the reasons specified in the column of “Reasons of declining.”

This structure is basically the same for the fisheries sector. The 11 projects from F-1 to F-11 were screened, and they are considered recommendable. The Team would not support F-20, F-21 and F-22 unless they are substantially revised.

In the community sector, a similar table is constructed, with four pilot projects endorsed by the Team for the presentation to the District Forum. On the other hand, three projects were turned down.

This is the process as of September 2010. Since then, however, some deduction, addition and the combination of plural pilot projects took place. Please refer further development of the pilot projects described 7.4, 7.5 and 7.6.

Here is how the Team has gathered the basic concepts of the candidate pilot projects. Actually, there is no textbook procedure to follow. Besides taking the actions stated below, it is not exaggeration that the Team has exploited every available opportunity to find the good seeds of pilot projects.

- (1) By taking advantage of occasions such as the District Forum at the GA office, donor meeting at the UNDP office, NGO gathering, the Team has appealed the provision of concept papers to line agencies, international donors and NGOs, explaining the aim, modality, resources as well as constraints of PDP Jaffna.
- (2) When the Team visited many institutions, including CBOs, for the sector study, community profiling and other fieldwork, the Team encouraged them to write down needs they feel strongly and consult with an appropriate line agency for the preparation of concept papers.
- (3) If the original thinker was not capable of presenting a formatted proposal, especially in English, the Team prepared the proposal on his or her behalf by consulting knowledgeable people on the subject matter.

**Table 7- 3: Proposed Project List of the Agriculture Sector as of Sep. 2010**

	Screened Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)	Present at Forum	Present Status	
A-1	Seed Cooperative	Input Supply	DOA	7.4	7	✓	Will be soon appraised by Exp.	District
A-2	Strengthening Agriculture Extension Services	Extension	DOA	20	15	Aug. 17	Will be soon appraised by Exp., with the poly tunnel component, the mobil unit component etc.	District
A-3	Promotion of Organic Farming	Extension	Sewalanka	10	5	September	Will be soon appraised by Exp.	Community
A-4	Model Livestock Farm	Education	Jaffna Univ.	8.3	5	September	Will be soon appraised by Exp.	District
A-5	Mushroom Spawn Production	Input Supply	FA + DOA	5.3	5.3	Aug. 17	Will be soon appraised by Exp., with the mushroom production center component.	District
A-6	Atchuchaveli Coconut Nursery	Input Supply	Coconut Board	13	7	Aug. 17	Coconut Board is preparing a new proposal for appraisal.	District
A-7	Fruit Collection Center	Marketing	DOA	8	5	September	Will be soon appraised by Exp., comparing with the JACHUFI Project.	District
A-8	Milk Processing in Point Pedro	Marketing	Livestock Coop	6.7	4.7	Aug. 17	Will be soon appraised by Exp.	Community
A-9	Organic Cashew Nut Production	Environment	UNDP	10	1.5	September	If UNDP agrees to be responsible for implementation, their proposal will be appraised by Exp.	Community
			<b>Total</b>	88.7	55.5			
	Declined Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)		Reason for declining	
A-20	Rehabilitation of Wells and Ditches	Infrastructure	DAD				PDP is currently rehabilitating tanks with DAD. It is better for PDP to concentrate on the tank project.	
A-21	Provision of Machineries and Implements	Input Supply	DAD	700	700		This is a big and expensive project beyond the scope of PDP. Also, Japan's assistance is being implemented in this aspect.	
A-22	Small Irrigation System in Kopay	Infrastructure	JICA Team	20	20		A time-consuming environmental clearance may be required	
A-23	Small Bund Construction	Infrastructure	Irrigation Dep.	15			ADB has recently decided to finance the project.	
A-24	Uplifting Farmers Income	Extension	VDF (NGO)				This project is too broad in scope and thus too costly.	
A-25	Empowering Agro Federation	Capacity Dev.	SOND (NGO)	15	15		This is an expensive project but its effectiveness is questionable.	
A-26	Rehabilitation of Wells and Ditches	Infrastructure	SOND (NGO)	1.8	1.8		PDP is currently rehabilitating tanks with DAD. It is better for PDP to concentrate on the tank project.	
A-27	Vegetable and fruit processing	Extension	SOND (NGO)	2.7	2.7		The subject and content of farmer training are not clear.	
A-28	Encourage Productivity of Quality Grapes	Extension	SOND (NGO)	2.9	2.9		The aim of the project is hard to understand.	
A-29	Encourage Productivity of Quality Bananas	Extension	SOND (NGO)	2.5	2.5		The proposal suggest a general merit but lacks technical specifics.	
A-30	Encourage Productivity of Quality Seeds	Extension	SOND (NGO)	2.8	2.8		The proposal suggest a general merit but lacks technical specifics.	
A-31	Upgrading the Bearing of Coconut	Input Supply	Coconut Cultivation Board	14.7	6		This is aimed to deliver free fertilizer to coconut farmers. Not interesting	
A-32	Provision of Vehicles	Input Supply	Animal Dep.	15	15		Only providing two vehicles can hardly make developmental effects. Not well-planned.	
A-33	Fruit Tree Nursery	Input Supply	Allarai Committee	1.7	1.7		The finance was already made by the government.	
			<b>Total</b>	794.1	770.4			

**Table 7- 4: Proposed Project List of the Fisheries Sector as of Sep. 2010**

	Screened Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)	Present at forum	Present Status	
F-1	Fishing Harbor in Point Pedro	Infrastructure	DFAR	500	1.5	✓	Will be soon appraised by Exp.	District
F-2	Gurunagar Fishing Harbor	Infrastructure	DFAR	500	1.5	✓	Will be soon appraised by Exp.	District
F-3	Multiday Boat Construction	Fishing Technology	DFAR	850	4	✓	Will be soon appraised by Exp.	District
F-4	Fisheries Management/Statistics	Fishery Management	JICA Team	3	1.5	September.	Expert will soon discuss with DFAR	District
F-5	Milkfish Farming	Aquaculture	VDF (NGO)	30	3	Aug. 17	Will be soon appraised by Exp.	Community
F-6	Seaweed Farming	Aquaculture	Sewalanka	30	3	Aug. 17	Will be soon presented to JICA	community
F-7	Sea Cucumber Farming	Aquaculture	Univ. of Jaffna	5	3.5	September.	Team is looking for the capable implementer of this project.	Community
F-8	Fish Auction Halls and Other facilities	Infrastructure	JICA Team	120	30	September.	The Team and DFAR will discuss priorities to give different landing sites.	Community
F-9	Improved Water Circulation of Jaffna Lagoon	Environment	RDA (Road Development Authority)		1.5	September.	If RDA prepares its proposal as scheduled, this will be appraised by Fisheries Exp.	District
F-10	Fish Aggregating Device (FAD)	Fishing Technology	JICA Team	10	1.5	September.	Expert will soon discuss with DFAR	Community
F-11	College of Fisheries	Education	Fisheries College	40	25	Aug. 17	Will be soon presented to JICA	District
			<b>Total</b>	2088	76			
	Declined Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)		Reason for declining	
F-20	Outboard Engine Training	Education	RRO (NGO)	1	1		PDP should concentrate on the reconstruction of the Fisheries College	
F-21	Boosting up Fishing Communities	Extension	VDF (NGO)	20	20		This project is too broad in scope and thus too costly.	
F-22	Increasing Fisheries Productivities	Extension	SOND (NGO)	58	58		This is a conventional give-away of boats and nets, which is questionable as a development strategy at this time.	
			<b>Total</b>	79	79			

**Table 7- 5: Proposed Project List of the Community Development Sector as of Sep. 2010**

	Screened Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)	Present at Forum	Present Status	
C-1	Pannai Consumer's Fish Market	Infrastructure	MC	22	20	September	Revised proposal to be submitted by Aug.17. Will be soon appraised by Exp and will be taken up as Batch 2 project.	District
C-2	Business Development and Marketing of Coir Industry and Food Products	Marketing	IDB	1	1	Aug. 17	Revised proposal to be submitted soon. Will be soon appraised by Exp.	Community
C-3	Marketing of Organic Products	Marketing	JSAC (NGO)	1	1	September	Revised proposal to be submitted by Aug.18. Will be soon appraised by Exp.	Community
C-4	Business Development and Marketing for Jaggery Products	Marketing	TRRO	1	1	September	First meeting will be held on Aug.17 and wait for the submission of proposal.	Community
			<b>Total</b>	25	23			
	Declined Projects	Sub-sector	Proposed by	Total Cost (million)	PDP Cost (million)		Reason for declining	
C-20	Renovation of Sinnakadai Market	Infrastructure	MC	20	20		The Sinnakadai Market is well-equipped comparing to Pannai Fish Market. PDP prioritized Pannai Market for support.	
C-21	Seafood Processing	Food Processing	TRRO	1.5	1.5		There was no need from WRDS for fish processing.	
C-22	Establishment of Two Model Villages on Goat Management	Livelihood	TRRO	1	1		There was no need from WRDS for goat rearing.	
			<b>Total</b>	2.5	2.5			



However, it is interesting to note that in many cases the most critical factor for project formulation was not the original project ideas *per se*, but integration and interaction with other ideas and the experience of other organizations, which took place after the submission of original project concepts. Original project concepts evolved and transformed into more realistic project ideas through further dialogue and the relay of ideas between different institutions and individuals.

The Table 7- 6 and Table 7- 7 summarize how the individual project concepts evolved in the agriculture and fisheries sectors. There were, of course, some projects for which project formulation process was rather straightforward; the original proposer has been developing his concept up to the level of a final proposal without any notable interaction with other institutions besides the Team.

In the agriculture sector, A-1 the Seed Cooperative and A-6 the Atchuchuveli Coconut Nursery fall in this category. For A-1, DOA has almost exclusively developed the project ideas up to the final proposal while for A-6, CCB has been very professional and confident in formulating the project from the onset. A-8 the Milk Processing in Point Pedro can also be said to belong to this category. In the fisheries sector, F-6 the Seaweed Farming Project proposed by Sewalanka appears to be the only project that has evolved in the similar way.

Still, they are the minority. Most of the pilot projects were processed into more realistic but yet more attractive projects by being relayed through the hands of different institutions despite such a short period of time. Through this “project evolution process,” some projects had been combined together and some split into separate projects.

The Team has intentionally facilitated this process, firstly because more input from and the involvement of plural parties are no doubt positive elements in securing the success of the pilot projects; and secondly because it may help magnify social awareness regarding specific development agendas which the Project encompasses.

Another noteworthy fact is that, as discussed briefly above, it is often ineffective, if not futile, to try to address issues raised by villagers within a narrow village context. This may sound paradoxical but true; this simply means even if the original request or project idea comes from villagers, the effective solution to the problems tends to require an intervention(s) in a larger perspective. When people long for the good seedlings of coconut, setting up a small nursery in their community is not always the best solution though it may sound otherwise.

**Table 7- 6: Relay of project ideas in the agriculture sector**

	<b>PROJECT</b>	<b>ORIGINAL PROPOSER</b>	<b>EVOLUTION</b>	<b>FURTHER EVOLUTION</b>	<b>FUTURE EVOLUTION</b>	<b>FORUM PROPOSER</b>
A-1	<b>Seed Cooperative</b>	SEEDCO + DOA	DOA	--	--	DOA
A-2	<b>Strengthening Agriculture Extension Services</b>	DOA	DOA + Team + Mushroom Association			DOA
A-3	<b>Promotion of Organic Farming</b>	Sewalanka, JSAC	Sewalanka + JSAC + Team	Sewalanka	DOA	Sewalanka
A-4	<b>Model Livestock Farm</b>	Jaffna Univ.	Jaffna Univ. + DOA	Jaffna Univ. + DAPH		DAPH?
A-5	<b>Mushroom Spawn Production</b>	Mushroom Farmer Association	DOA + Team			DOA?
A-6	<b>Atchuchaveli Coconut Nursery</b>	Coconut Cultivation Board	Coconut Cultivation Board + Team			Coconut Cultivation Board
A-7	<b>Fruit Collection Center</b>	DOA, JACHFI	Team			
A-8	<b>Milk Processing in Point Pedro</b>	Local veterinarian	Livestock Coop + DAPH	--	--	Local veterinarian
A-9	<b>Organic Cashew Nut Production</b>	Local Farmers	UNDP	Team + UNDP		

**Table 7- 7: Relay of project ideas in the fisheries sector**

	<b>PROJECT</b>	<b>ORIGINAL PROPOSER</b>	<b>EVOLUTION</b>	<b>FURTHER EVOLUTION</b>	<b>FUTURE EVOLUTION</b>	<b>FORUM PROPOSER</b>
F-1	<b>Fishing Harbor in Point Pedro</b>	DFAR	Team	--	Jaffna Univ.	DFAR
F-2	<b>Gurunagar Fishing Harbor</b>	DFAR	Team	--	Jaffna Univ.	DFAR
F-3	<b>Multiday Boat Construction</b>	DFAR + DTZ	Team	DFAR	Consultant	DFAR
F-4	<b>Fisheries Management/Statistics</b>	Team	DFAR	FCS	Team	DFAR?
F-5	<b>Milkfish Farming</b>	VDF (NGO)	DFAR + VDF		Team + NARA	VDF
F-6	<b>Seaweed Farming</b>	Sewalanka	--	--	--	Sewalanka
F-7	<b>Sea Cucumber Farming</b>	Team	Jaffna Univ.	DFAR + FCA	NGO	NGO?
F-8	<b>Fish Auction Halls and Other facilities</b>	DFAR	Team	FCS	Team	DFAR?
F-9	<b>Improved Water Circulation of Jaffna Lagoon</b>	Team	RDA (Road Development Authority)			RDA?
F-10	<b>Fish Aggregating Device (FAD)</b>	Team	DFAR	--	FCA	FCA?
F-11	<b>College of Fisheries</b>	NGO	Team	Jaffna Fisheries College	Ministry of Youth Affairs	Jaffna Fisheries College

When the Team, as the seconder, considered that a proposal reaches a satisfactory level of maturity and readiness, the proposing institution – not necessarily the very original proposer any longer - was given a chance for formal presentation at the District Forum.

On the other hand, the Team adopted the different approach to finalize the pilot projects for WRDSs although two of the proposed pilot projects (C-2 and C-3) became the basis for ideas, while C-1 and C-4

were declined by JICA and District Steering Committee respectively. The Team selected one active and enthusiastic WRDS from each of the five DS Divisions as a model society with the following set of criteria:

1. Security: There must be no landmines, nor HSZ.
2. Basic institutionalization: WRDS conducts routine meetings, book keeping, and minutes of meetings.
3. Active livelihood activity: A cooperative attitude must be observed among members.
4. Socially vulnerable people: It is important that the WRDS has more members from socially vulnerable groups, such as IDPs/WHF/disabled.
5. No duplication with other donors: Societies without donor support or with only limited support (less than LKR.200,000 on livelihood in the last five years) will be given priority.

The profiles of the WRDSs in the five DS Divisions contained detailed information about all the assessed WRDSs as attached to Appendix 2-1. In following the criteria used above, the Team provided ratings on the scale of 1 to 5, with 5 being the highest. As a result, the following WRDSs were selected for intervention by the Project.

- Velanai East WRDS
- Puloli South – Singanagar WRDS
- Thaavalai Ijattalai WRDS
- Siruppiddi East WRDS
- Aththiyadi WRDS
- Velanai DS Division
- Point Pedro DS Division
- Chavakachcheri DS Division
- Koppay DS Division
- Jaffna DS Division

The Team finalized the formulation of Pilot Projects for all WRDSs in five DS Divisions. One Widow’s Society in Sandilipay DS Divisions was selected as a support for socially vulnerable group. Appraisals of these projects follow in Section of ‘7.7. Pilot Projects for Women in Community.’

In addition to the pilot projects listed here, the Team considered the possibility of assisting other CBOs in Jaffna. They include Community Center, MPCS and RDS. Unfortunately, however, after many years of the conflict, they are very weak in intuitional capacity and, in the case of MPCS, financially crippled. It seemed profoundly difficult, if not impossible, to implement pilot projects together with these CBOs while bolstering their institutional capacities in the short project period.

**7.3 Selection of Pilot Projects**

**7.3.1 Screening Pilot Projects**

This section will describe the perception and methodology concerning the process in which the Team appraised proposed projects. Naturally, not all candidate pilot projects -- either originally identified by the Team in the field or proposed to the Team by departments, NGOs and any other institutions – have reached the final stage of appraisal. Some are considered unready in terms of project preparation and others overly ambitious or unrealistic. Financial and manpower constraints of PDP Jaffna were also taken into account.

When the Team scrutinized the proposed pilot projects, whether coming from outside or nurtured inside the Team, it reviewed them from the following points of view. As a result, some were simply declined before the stage of appraisal while others were advised to improve. Reasons for disapproval of the individual proposals are noted in the lists of Table 7-3, Table 7-4 and Table 7-5.

(1) Practicality for implementation

Out of a number of constraints of PDP Jaffna, the time constraint has a straitjacket effect. The Team has no choice but to drop some interesting projects due to this constraint.

The possibility of rehabilitating other irrigation tanks was ruled out due to uncertainty on when the work can begin in 2011. It is hard to forecast in what month the water levels of tanks become low enough to permit rehabilitation works.

Projects such as F-1 the Fishing Harbor in Point Pedro and F-3 the Multi Day Boat Construction was expected to take a long time for feasibility studies alone. Yet, their critical importance in the vision of long-term fisheries development in Jaffna has made the Team endorse their adoption. For these projects, an activity possibly implemented within this Project before August 2011 was to prepare an initial concept paper, that is, the critical first milestone in a long way to go for the realization of these projects.

The fund availability is naturally another constraint. It was difficult for PDP Jaffna to accommodate a very costly pilot project or too many pilot projects even if they are inexpensive.

(2) Security Consideration

The fact that one of the tanks originally scheduled for rehabilitation was eventually cancelled after the discovery of a UXO nearby the site illustrates the degree of prudence JICA attaches to the security consideration in conducting PDP Jaffna. This consideration also affected the selection of pilot projects as well. The concern that some projects were proposed in areas not totally secured forced the Team to decline them even before examining project details. A project was proposed to drain excessive water in a farming area of Chavakachcheri DS Division. However, since the project site is next to a HSZ, the Team decided not to take it up.

(3) Avoidance of duplication with other donors

The Team has avoided, to a practical extent, the possible duplication with assistance of other donors. For instance, A-21 the Provision of Machineries and Implements was delisted because this project would likely duplicate with another ongoing assistance from Japan's ODA in the provision of agricultural machineries to Northern Province including Jaffna.

As for A-23 the Small Bund Construction which aimed to rehabilitate a bund in Mandaitive, Velanai DS Division, it turned out that an ADB project had committed to fix this bund. Considering that support from

PDP Jaffna is no longer needed, the Team informed the Irrigation Department and other parties of its withdrawal.

For the pilot projects formulated for WRDSs, the Team has made a rule that qualified WRDSs should have no record of donor support or, if supported, no more than LKR 200,000 for livelihood activity during the last five years.

#### (4) Issues of Quality and Mindset

In Jaffna, local NGOs have been working largely for humanitarian aid and resettlement support for returnees and thus some are not familiar with more development-type projects. The Team received several proposals which failed to explain well the objectives and content of their proposed projects. Although the Team tried to be consultative rather than judgmental in dealing with these proposals, it had no choice but to decline some of them.

### **7.3.2 Appraisal and Recommendation of Pilot Projects**

The pilot projects, reviewed through and evaluated positively, were eventually put forward to the appraisal by the Team. The Team has adopted a set of appraisal criteria: i) technical feasibility and impact, ii) financial viability and economic impact, iii) environmental impact, iv) social impact on the socially vulnerable people, and v) institutional capacity, all of which are standards in project appraisal.

However, it should be remembered that to find a development project perfectly satisfying the set of criteria is a rare occasion, if not nonexistent. This was particularly so given a short time allocated for PDP Jaffna in an unfamiliar location.

We considered that a trial-and-error process along project implementation would provide the best opportunities for capacity development for line agencies, NGOs, and beneficiaries involved. In essence, the Pilot Projects mean experimentation through the implementation of actual projects whose success is assumed at a reasonable probability but not guaranteed at all.

#### (1) Technical Feasibility and Impact

In terms of technical feasibility, the Team considered level of technology involved in each pilot project. If the required technology was either well-mastered by local people or could be adopted without major difficulties, a higher mark was given in technical feasibility of a specific pilot project. Even if some training was needed for a local target group to handle the technology, higher points were possibly given, depending on the degree of appropriateness and expected impact of the pilot project. One additional consideration for technical feasibility was whether a certain pilot project would be completed within eight months before the end of PDP Jaffna.

For instance, primary issue of the three originally proposed aquaculture projects – milkfish culture, seaweed farming and sea cucumber fattening, was concern over the technical feasibilities of these ventures. The seaweed culture and milkfish culture are technically well founded activities that have been common in Southeast Asia and the south Pacific approximately in the last 30 years. Also relatively safe in a technical sense is the fattening practice of sea cucumbers as long as the environment of stocking place is not too hostile. However, they were new undertakings in Jaffna and success was not guaranteed at all. As NARA has pointed out, water salinity might be too high in Jaffna lagoon or tide and current in Velanai might wash away seaweed lopes, or the lack of cooperative spirit among local fishermen might hamper the sound development of the pilot project. One can find out these matters only through practice, not forecasting.

On the other hand, the pilot projects in the agriculture sector are generally more secure in terms of technical feasibility as technology proven elsewhere in Sri Lanka was used. We could expect technical support from national institutions concerned.

For some other projects, their technical feasibilities were taken for granted and thereby posed no issue.

## (2) Financial Viability and Economic Impact

Financial viability and economic impact was a slightly elusive criteria to apply to the pilot projects, since many of them were of experimental nature and service-oriented and therefore did not necessarily demand a strict cost-benefit investigation. Rather, focus for judgment was economic impact that the individual pilot projects could possibly generate. Moreover, in order not to get stuck in the middle of the implementation stage, the financial capabilities of implementing institutions were also examined. Particularly concerned was the generally poor financial and manpower (personnel) situation of the concerned institutions, even with the standards of Sri Lanka. Many were still in the long process of improving their operations to the average level that similar institutions in Sri Lanka had already achieved, and the completion of this process appeared to take some time.

In practice, the major consideration was whether the implementing institution concerned was financially capable to run the pilot project. Unfortunately, not all the candidate institutions passed the test.

For example, notwithstanding the basic agreement of the Team on the project concept of A-4 the Model Livestock Farm which the UOJ was proposing, one of the topics seriously discussed among UOJ, DOA and the Team centered on the financial capacity of UOJ to operate the model farms. Unfortunately, this question was never answered adequately, and the project was finally declined in the appraisal stage.

## (3) Environmental Impact

This was an examination on whether the pilot projects were likely to bring positive or negative impact on the environment. By the nature of the pilot project being small-scale and short-termed, the environmental impacts of pilot projects were generally very limited either positively or adversely.

Some projects were expected to generate a very positive impact on the environment. A-9 the Cashew Nut Production, for instance, was intended to provide cash income to local residents, including returnees and WHFs in Velanai by planting cashew nut seedlings in saline sandy lands, which was generally an infertile area. The benefits of having a cashew nut plantation were calculated based on an example in other DS. Unfortunately, it turned out later that soil condition of the proposed site was not suitable for cashew nut, and this killed the pilot project. If this pilot project had been successfully implemented, however, it could have had a positive environmental effect through the increase in vegetation coverage in barren areas.

Also, A-3 the Promotion of Organic Farming and A-6 the Atchuchuveile Coconut Nursery would no doubt be helping to protect the environment.

On the other hand, launching F-1, F-2 and F-3 particularly require a thorough environmental study by professionals. F-9 the Improved Water Circulation of Jaffna Lagoon was a typical environmental project with the objective to prevent the possible future deterioration of water quality in the lagoon so as to safeguard the interest of fisheries and aquaculture there. Unfortunately, the Team had to drop this project as well because a technical project proposal from the Road Department could not be made in time.

Other pilot projects are either environmentally neutral or have only trivial effects, if any.

#### (4) Social Benefits to the Vulnerable

The Team has set social benefits of the individual pilot projects to socially vulnerable people as one of the central criteria in judging their usefulness and determining priority. Here, the vulnerable means returnees, WHFs, handicapped people and other victims of the conflict. The pilot projects in the lists were not designed exclusively for the vulnerable, but the inclusion of and special consideration for the socially vulnerable people were consciously pursued to a practical extent.

As discussed in Chapter 2, one of difficulties in doing so was, however, the psychological as well as social barriers separating the vulnerable from other members of local communities. Traumatic experience in battlefields, the lack of social training, deep-rooted suspicion to and from neighbors, extremely short time horizon for day-by-day survival altogether block their effective participation in community development.

To deal with this obstacle takes a longer time span than PDP Jaffna. Understanding the sheer magnitude of the issue in Jaffna District alone suggests that, if a donor intends to tackle with the subject, an intervention ought to be prepared, with a project period of four years or more. Meanwhile, what the Project could do best before September 2011 was to take into consideration the interest of the socially vulnerable people in implementing the pilot project.

#### (5) Institutional Capabilities

This is always one of the hardest aspects of project appraisal to gauge in advance, especially when many institutions were involved. The Team has tried to understand the capabilities of implementation

institutions through the review of their track records and interview with their key staff members about institution’s activities. The Team often visited the institutions, instead of inviting them to the project office, and observed their activities in the field. As a facilitation effort to put F-11 the College of Fisheries on a right track as early as possible, the Team visited the National Institute of Fisheries and Nautical Engineering in Mattakkuliya, which is the principal school among eight Fisheries Colleges in Sri Lanka.

Notwithstanding all the precautions, knowing in advance the institutional capacity of implementing institutions is intrinsically a difficult task, often leading to a few positive or negative surprises at the end of project implementation. With the acknowledgement of some inherent inadequacy in gauging institutional capability, what really matters is to take a flexible posture for the improvement of the capacity and performance of implementing institutions.

**7.4 Pilot Projects in the Agriculture Sector**

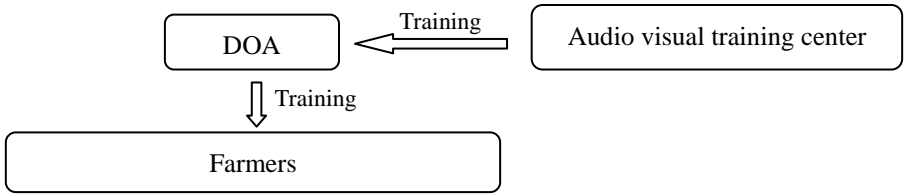
**7.4.1 Strengthening of Seed Production Cooperative Society (AC-1)**

Pilot Project Title (No.)	Strengthening of Seed Production Cooperative Society (AC-1)
Pilot Project Site	Thirunelvely, Jaffna District
Background	<p>Since inferior seed is one of the causes of low yield, stable supply of quality seeds is one of the key to increase productivity of crops.</p> <p>Farmers are able to get some high-quality seeds from SEEDCO via ASC. SEEDCO had been supplying 1,860kg vegetable seeds and 90,000kg of paddy seeds annually. However, SEEDCO was only able to supply less than 20% of the total seed requirement of the district. The shortfall was being met by personal seed production of farmers and private seed suppliers; however the quality of their seeds is generally substandard.</p> <p>SEEDCO was cleaning paddy seed and vegetable seeds manually, its efficiency was very low and its capacity was limited. It was necessary to up-grade seed cleaning capacity, so that more famers would be able to obtain better quality seeds.</p>
Objective	This Project supports SEEDCO in its aim of increasing the quantity as well as to improving the quality of paddy and vegetable seeds to be distributed to farmers in the district.
Activities	<p>(1) Provision of seed cleaning machine and accessories</p> <p>(2) Construction of a small structure to house the cleaner</p> <p>(3) Provision of Dunnage &amp; grain moisture meter</p> <p>(4) Provision of training on operation and maintenance of seed cleaning machine</p>
Implementing System	<pre> graph TD     CF[Contract farmers] -- Supply seed --&gt; SEEDCO[SEEDCO]     DOA[DOA] -- Technical support --&gt; SEEDCO     SEEDCO -- Supply seed --&gt; F[Farmers]     CMS[Contractor and machinery suppliers] -- Construction &amp; machinery supply --&gt; SEEDCO     </pre> <p>(1) Department of Agriculture (DOA) provides technical support to SEEDCO.  (2) SEEDCO operates seed cleaner and supplies quality seeds to farmers.  (3) The contractor constructs building and the machinery supplier supplies seed cleaner.</p>
Input	<p>(1) Cleaning machine and accessories</p> <p>(2) Dunnages &amp; grain moisture meter</p> <p>(3) Construction of a small structure to house the cleaner</p>
Expected Achievement	<p>(1) 400-500 Mt of paddy will be cleaned by machine annually.</p> <p>(2) Technicians of SEEDCO will get skill to operate and maintain the facility. Hence, constant supply of quality seeds will be achieved.</p> <p>(3) Quality seed supply from SEEDCO will be increased from 20% of local demand to 30%.</p>



Target Group	(1) 471 SEEDCO members (direct beneficiaries) (2) 62,000 farming households in Jaffna (indirect beneficiaries)												
Implementing Schedule													
No.	Activities	Implementation (2010-2011)											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	Purchasing of Seed grader, associated machineries (moisture meter, elevator etc)												
2	Training to technical staff how to operate												
3	Calling tenders for contractors and signing contract with them												
4	Construction of house.												
5	Installing machine and starting cleaning												
6	Monitoring												
7	Evaluation												
8	Feedback to the road map, WS												
Indicator for Pilot Project Achievement	Technical Aspect	- Amount of quality seed supplied by SEEDCO - Technical improvement of SEEDCO on operation and maintenance of seed cleaning facility											
	Institutional Aspect	- Involvement of member farmers in seed production and operation of seed cleaning facility											

#### 7.4.2 Strengthening of Agricultural Extension Service (AC-2)

Pilot Project Title (No.)	Strengthening of Agricultural Extension Services (AC-2)
Pilot Project Site	Thirunelvey, Jaffna District
Background	<p>To increase productivity and production of crops, farmers of Jaffna must be provided with training on basic knowledge of growing crops including soil fertility, groundwater management, plant protection and post-harvest technology as well as new technologies such as banana dense planting.</p> <p>Agricultural Extension Service plays a vital role in providing knowledge and technology to the farming communities to step-up agricultural production, productivity and value addition in Jaffna District.</p> <p>Several training programmes had been conducted for farmers at DATC, but DATC lacked the latest training equipment and facilities. AIs' knowledge was also rather outdated. Thus, DATC was unable to provide quality training on the latest technologies.</p>
Objective	This Project aims to strengthen the agriculture extension services via providing audio visual equipment and quality training. This equipment will be utilized to provide quality training to farmers, youth and farm women in order to increase the agricultural productivity, production and quality.
Activities	<p>(1) Provision of necessary equipment for the audio visual unit.</p> <p>(2) Training of extension officers on audio visual equipment.</p> <p>(3) Training of farmers on important topics such as soil fertility, groundwater management, banana dense planting, Plant Protection and pre-post harvest technology.</p>
Implementing System	 <pre> graph TD     A[Audio visual training center] -- Training --&gt; B[DOA]     B -- Training --&gt; C[Farmers]   </pre> <p>(1) Audio visual training center, Gannoruwa, Kandy provides training session to extension officers of DOA on how to use audio visual equipment.</p> <p>(2) DOA's instructors provide training sessions of agricultural technologies to farmers</p>
Input	<p>(1) Audio visual equipment</p> <p>(2) Assistance to conduct training</p>

Expected Achievement	<p>(1) Extension officers will get knowledge of utilizing audio visual equipment, thus the training will be proved effectively.</p> <p>(2) Farmers can access digitalized training aids, which will reflect the originality of the sources. Therefore, they can get clear picture of innovative/modern technologies, in turn, they grasp valuable information on subject matter. This project is an ideal opportunity to expose local farmers to modern and more eco-friendly farming technology.</p> <p>(3) Modernized technology transfer to grass root farmers; it will lead to reduce cost of production and increase yield of crop components. Training on food preservation and value addition activities will help to develop the skills and the knowledge of returnees, widows, disables etc.</p> <p>(4) Sustainable and eco-friendly farming practices will be introduced. Farmers will be directed to apply the low amount of inorganic fertilizers to improve the soil fertility while low dosage of agrochemicals will be sprayed for pest &amp; disease management. This will reduce the ground water and environmental pollution. Positive environmental impact would be generated, though it will be difficult to assess the effect.</p>											
Target Group	<p>(1) 20 extension officers for the utilization of audio visual equipment</p> <p>(2) 1000 farmers for farmer training</p>											
Implementing Schedule												
No.	Activities	Implementation (2010-2011)										
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	Purchasing of video camera, still camera, multi media etc.											
2	Audio visual training to DOA staff											
3	Training to 1000 farmers on different topics at DATC											
4	Monitoring											
5	Evaluation											
6	Feedback to the road map, WS											
Indicator for Pilot Project Achievement	Technical Aspect	<ul style="list-style-type: none"> <li>- Number of trainees</li> <li>- Change of pre-post test result</li> <li>- Feedback from trained farmers</li> </ul>										
	Institutional Aspect	<ul style="list-style-type: none"> <li>- Improvement of trainers' knowledge</li> </ul>										

### 7.4.3 Strengthening of the Mango Growers Society (AC-3)

Pilot Project Title (No.)	Strengthening of Mango Growers Society (AC-3)
Pilot Project Site	Chavakatchcheri, Jaffna District
Background	<p>Ensuring the development of the traditional Jaffna specialties, while at the same time developing new local specialties, is the first priority for the development of vegetables and fruits in highland. Jaffna District was traditionally famous for mango production, which was cultivated in an extent of 684.5ha with an average production of 5 tons /ha.</p> <p>Most of the mango trees were old, over grown and become unproductive due to poor maintenance. Pruning and training of trees had not been carried out by the farmers which were essential to enhance availability of sunlight to entire canopy and also to check the pest infestation. Farmers had lost their economical strength and they were not in a position to restore their status back as was in the year of early 1990's.</p> <p>On the other hand, the Chavakachcheri Fruit Producers and Sales Cooperative Society, which was mango growers' society in real terms, was established in 2009. The society was expected to lead the development of mango production. However, the society was still young and need some more support from DOA and other agencies.</p>
Objective	This Pilot Project aims to improve the productivity of mango cultivation while strengthening the capability of the Chavakachcheri Fruit Producers and Sales Cooperative Society, which is mango growers' society in real terms.
Activities	<ul style="list-style-type: none"> <li>(1) Provision of essential tools for mango cultivation</li> <li>(2) Provision of training to young members of mango growers' society.</li> <li>(3) Provision of awareness programme to mango growers in Chavakachcheri.</li> <li>(4) Provision of exposure visit</li> </ul>

<p>Implementing System</p>	<p>(1) DOA provides technical training to young mango growers who will join pruning group of the society.  (2) DOA provide awareness programme to mongo growers.  (3) Essential tools are provided to mango growers.  (4) PDP community team provides capacity building training to the society members</p>																																																																																																																									
<p>Input</p>	<p>(1) Provision of training &amp; exposure visit  (2) Provision of essential tools</p>																																																																																																																									
<p>Expected Achievement</p>	<p>(1) This project is designed to provide necessary training and essential tools to the society members to help their activities in pruning old mango trees, producing good quality seedlings and facilitating marketing of the fruits. Pruning and proper training of old mango trees will lead to 20% yield increase and better quality. Hence, it is expected that this project will enhance their production capacity and increase income by 20%.  (2) This will induce more youths to become part of the society and encourage local farmers to shape up their old mango trees.  (3) The society will have better management thorough capacity building training.</p>																																																																																																																									
<p>Target Group</p>	<p>(1) 48 youth and farmers for technical training  (2) 500 mango growers for awareness programme  (3) 20 management staff of the society for capacity building  (4) 40 mango growers for exposure visit</p>																																																																																																																									
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<p>Indicator for Pilot Project Achievement</p>	<p>Technical Aspect  Institutional Aspect</p>	<p>- Number of mango trees pruned  - Number of mango growers practicing technology learned  - Institutional development of Mango Growers Society in terms of progress of meetings, other activities and recording condition</p>																																																																																																																								

#### 7.4.4 Promotion of Mushroom Cultivation (AC-4)

<p>Pilot Project Title (No.)</p>	<p>Promotion of Mushroom Cultivation (AC-4)</p>
<p>Pilot Project Site</p>	<p>Thirunelvey, Jaffna District</p>
<p>Background</p>	<p>Developing new local specialties which are profitable and suitable to the Jaffna's climate and soil is necessary for the development of agriculture.</p> <p>Mushroom cultivation is one of those. At the beginning of the project, about 100 families in Jaffna district had newly started mushroom cultivation with the support of various projects. The production of mushroom was insufficient to fulfill the requirements of the district population. The level of mushroom production differed from family to family based on their technical and managerial skills.</p> <p>Also farmers were facing difficulty to obtain quality mushroom spawn. Spawn needed for mushroom cultivation was delivered from Colombo. However, the delivery was often disrupted due to various logistic reasons, causing a serious constraint for mushroom production in Jaffna.</p>

Objective	This pilot project aims to promote mushroom cultivation among local farmers.												
Activities	(1) Construction of a mushroom spawns production facility. (2) Provision of training with a demonstration facility for strengthening the extension service. (3) Provision of capability building training to the Mushroom Producers and Sales Society.												
Implementing System	<p>(1) The contractor constructs laboratory building and demonstration sheds. And the equipment suppliers supply necessary equipment for spawn production.</p> <p>(2) DOA provides technical training to mushroom growers utilizing mushroom demonstration facility.</p> <p>(3) Mushroom spawn production and demonstration facility produces and supplies spawns to farmers. Same time, the facility produces mushroom for demonstration purpose.</p> <p>(4) PDP community team provides capacity building training to the society.</p>												
Input	(1) Construction of spawn production laboratory and mushroom production demonstration sheds (2) Provision of training to farmers and the society (3) Provision of necessary equipment for the laboratory												
Expected Achievement	(1) Technicians employed for the facility will attain skills necessary to operate and maintain the facility. The facility will steadily produce spawn to satisfy local demand as well as demand of neighboring districts. (2) It is expected that the existing mushroom producers can enjoy a stable supply of spawn from the new facility and many more farmers can start mushroom business in the future. Socially vulnerable groups such as women headed families, IDPs, returnees and disables can join this simplest cottage industry and make good earnings. (3) Capacity of mushroom growers' society will be enhanced.												
Target Group	(1) 100 farmers for technical training (2) 20 administrative committee members of the society for capacity building (3) 2 technician and 5 DOA staff for spawn production technology												
Implementing Schedule													
No.	Activities	Implementation (2010-2011)											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	Calling tender for contractors for the shed and the laboratory												
2	Construction of sheds.												
3	Training to mushroom cultivators												
4	Construction of laboratory												
5	Purchasing of equipments												
6	Training to staff and farmers how to operate equipments and produce spawns												
7	Producing spawns												
8	Monitoring												
9	Evaluation												
10	Feedback to the road map, WS												
Indicator for Pilot Project Achievement	Technical Aspect	- Amount of spawn produced by the mushroom spawn production facility - Technical improvement of technicians on operation and maintenance of the mushroom spawn production facility											
	Institutional Aspect	- Number of members of the Mushroom Cultivation Society - Institutional development of the Mushroom Cultivation Society in terms of progress of meetings, other activities, and recording condition											

### 7.4.5 Rehabilitation of Atchchuvveli Coconut Nursery (AC-5)

Pilot Project Title (No.)	Rehabilitation of Atchchuvveli Coconut Seedlings Nursery (AC-5)
Pilot Project Site	Atchchuvveli, Jaffna District
Background	<p>Coconut trees can be found scattered all across Jaffna Peninsula. More trees are grown along the coastal areas where sandy soil is prevalent. The amount of land used for cultivating coconut was 12,480ha as of 2002. However, since coconut trees in as much as 6,125ha were damaged during the conflict , the amount of viable land for coconut production was only 6,355ha in 2009. Annual demand for coconuts in the district is estimated at around 78 million nuts. At the beginning of the project, only 20–30% of this demand was being met locally. To recover the production of coconut quickly, it was necessary to supply quality seedlings at the highest pace and volume possible.</p> <p>CCB has a coconut nursery over 2.8ha in size in Atchchuvveli, Kopay DS Division, with a capacity of 150,000 seed nuts. This nursery can provide genetically superior plants, and is thus helping to increase coconut production and rehabilitate low-yield coconut plantations. However, The CCB nursery was not used for a long time. It was heavily damaged during the conflict. CCB reopened the nursery in Jaffna in 2010 but the number of seedlings produced was only 60,000 in 2010. Some seedlings from the nursery were projected to be distributed free of charge to returnee farmers.</p>
Objective	This Project is intended to recover fully the nursery production so that a large number of local famers can get quality seedlings from the nursery at a reasonable price.
Activities	(1) The recovery of Atchchuvveli Coconut Nursery, including construction of facilities and the provision of machines and hardware
Implementing System	<pre> graph TD     Contractor[Contractor Rehabilitation work] --&gt; CCB_North[CCB northern region Management]     CCB_North --&gt; CCB_Nursery[CCB Nursery Training]     CCB_Nursery --&gt; Coconut_growers[Coconut growers Provide seedlings]     FMTC[FMTC Training] --&gt; CCB_Nursery     Machineries[Machineries suppliers Supply machineries] --&gt; CCB_Nursery     </pre> <p>(1) The contractor constructs training hall and the machineries suppliers provide farm machineries.</p> <p>(2) Farm Mechanization Training Center (FMTC) trains the nursery workers on machinery operation.</p> <p>(3) CCB regional office manages coconut nursery as well as provides technical training to coconut growers.</p> <p>(4) CCB nursery produces coconut seedlings and supply seedlings to coconut growers.</p>
Input	(1) Reconstruction of nursery facilities and infrastructure (2) Provision of machines and hardware needed in the nursery (3) Provision of training to farmer
Expected Achievement	(1) CCB nursery will be rehabilitated and increase the annual production of coconut seedlings up to 15,000. (2) Technicians who are in charge of operating irrigation facility and farm machineries of the nursery will attain the skills to operate and maintain the facility and machineries. And the nursery will be operated at the maximum capacity of production. (3) CCB nursery will utilize the new training hall and provide technical training to coconut farmers. Farmers are expected to gain improved cultivation technology and to apply into practice, thus the productivity of coconut will be increased. (4) Production of local coconuts in Jaffna is expected to recover as of pre-conflict level and the money spent to buy coconuts from outside Jaffna is expected to be reduced. (5) Provision of coconuts seedlings from the nursery to IDPs and returnees will fulfill their home consumption as well as give an extra income to them.

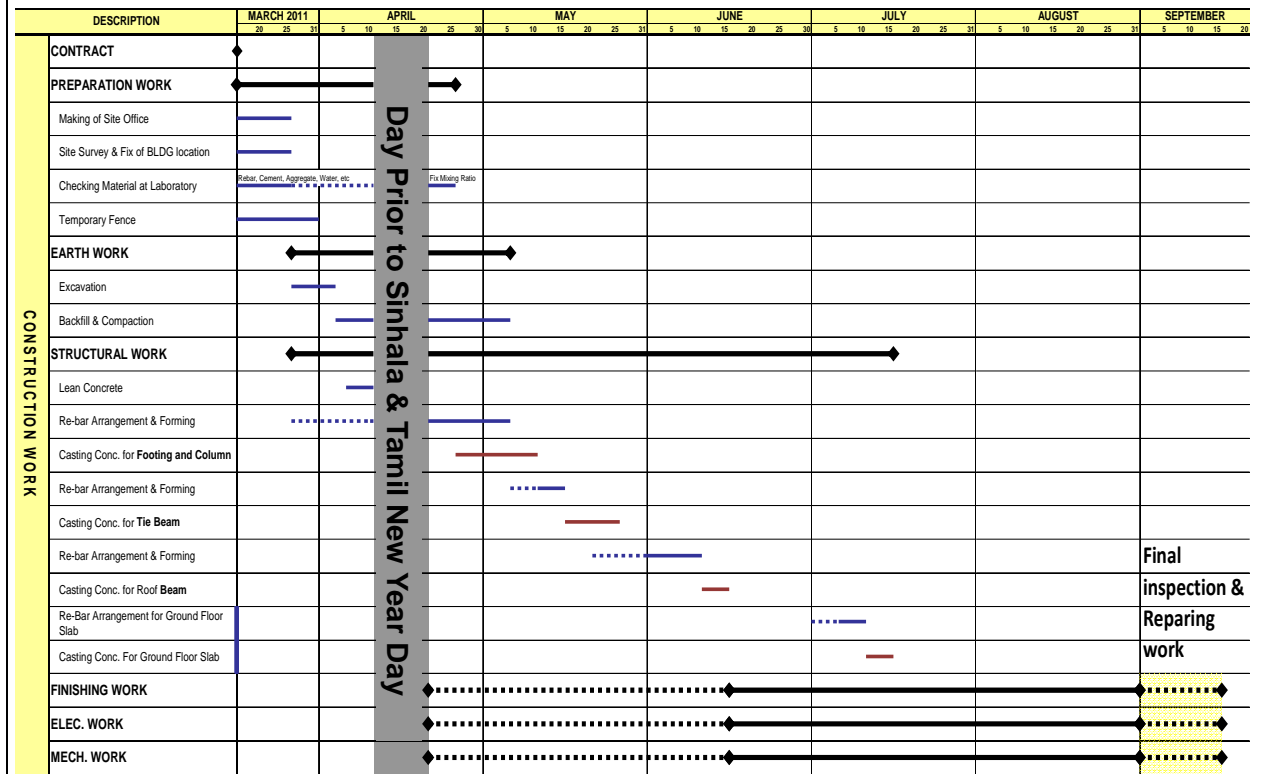
Target Group	(1) 5 staff of CCB nursery (2) 62,000 farming households (indirect beneficiaries)		Please refer to the Table for IRC										
Implementing Schedule													
No.	Activities	Implementation (2010-2011)											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	Calling tenders for contractors (by IRC)						IRC						
2	Construction of training hall (by IRC)											IRC	
3	Purchasing of small items.												
4	Purchasing and supplying of 4WT &												
5	Setting up Sprinkler unit												
6	Training to coconut farmers on various aspects of coconut cultivation												
7	Monitoring												
8	Evaluation												
9	Feedback to the road map, WS												
Indicator for Pilot Project Achievement	Technical Aspect	- Number of coconut seedlings produced at the Nursery - Technical improvement of technicians on operation and maintenance of irrigation facility and agricultural machineries											
	Institutional Aspect	- Number of farmer training courses conducted at the Nursery											

### Infrastructure Rehabilitation Component

Component Title	Rehabilitation of Atchuhuveli Coconut Nursery, Jaffna (AC-5)	
Objective	Original function of the Coconut Nursery is recovered.	
Activities	(1) Construction works for Coconut Nursery (2) Training on O&M and Office Management	
Inputs	Facility: one-story building with 109 m <sup>2</sup> total floor area including Lecture Hall, Administration Office, Washrooms, Garage, Water Supply System for Irrigation, Water Supply System for Drinking with elevated water tank, Boundary Wall (4 side, total 865m), and Access Road Pavement (length 130m), see Appendix 7-21: As-built Drawings	
Indicator for IRC Achievement	Technical Aspect	(1) Coconut Nursery's facilities are renovated with local quality standards. (2) Constructed boundary wall can prevent the coconut nursery from wild animals.
	Institutional Aspect	Capacity of O&M of the Coconut Nursery is improved
Implementing System	<p>The Employer: JICA The Engineer: JICA Study Team The Contractor: Buildmart Lanka (PVT) Ltd.</p> <div style="text-align: center;"> <p>●Contract</p> <pre> graph LR     JSL[JICA Sri Lanka] --- CA[Contract Agreement]     NIFNE --- CA     CCB --- CA     JGA[Jaffna GA] --- CA     CA --- Contractor           </pre> <p>●Construction</p> <pre> graph TD     JSL[JICA Sri Lanka] -- monitoring --&gt; CM[Construction Management JICA Study Team as the Engineer]     CM --&gt; Contractor[Contractor Construction Work]           </pre> </div>	

Construction period	Construction Works: 15 March 2011 – 15 September 2011 Defect Liability Period: 6 months
Procedure	<ul style="list-style-type: none"> <li>-Detailed Design and Preparation of Bid Documents: October 2010 to January 2011</li> <li>- Soil Investigation: November to December 2010</li> <li>- Pre-Qualification: December 2010</li> <li>- Distribution of Bid Documents: 31 January to 2 February 2011</li> <li>- Bid Opening: 15 February 2011</li> <li>- Contract Agreement: 15 March 2011</li> <li>- Commencement of Construction Works: 16 March 2011</li> <li>- Safety Workshop: 16 March 2011</li> <li>- O&amp;M Workshop: 4 September 2011</li> <li>- Final Inspection: 14 September 2011</li> <li>- Handing Over: 15 September 2011</li> </ul>

### Construction Schedule



### 7.4.6 Improvement of Milk Processing Facility in Point Pedro (AC-6)

Pilot Project Title (No.)	Improvement of Milk Processing Facility in Point Pedro (AC-6)
Pilot Project Site	Point Pedro, Jaffna District
Background	<p>To increase local milk consumption, diversification of processed milk product is one of the solutions.</p> <p>There was no large animal-products processing industry in Jaffna. However, a few LIBCOs were producing some sort of processed milk products such as milk juice packets, yoghurt, lollies, and paneer. Compared to the other 11 LIBCOs, the Point Pedro LIBCO was functioning particularly well in terms of milk processing. Before starting the project, they did not have proper production and storage facilities, limiting their production.</p> <p>LIBCO is taking important role to develop livestock production in Jaffna. However, most of the LIBCOs were not very active. They were lack of good administration and poor management. As LIBCO, Point Pedro had shown better performance than other LIBCOs. Further support to develop this LIBCO as a model case was envisaged.</p>
Objective	The Project is to facilitate further this success by providing a facility and hardware necessary for business growth.



Activities	(1) Construction of milk processing facility (2) Provision of processing equipment and refrigerator mini truck (3) Provision of capacity building training to LIBCO
Implementing System	<p>(1) The contractor constructs facility building and the machineries suppliers supply necessary machineries and equipment to processing facility. (2) Department of Animal Production and Health (DAPH) supports LIBCO and provides technical training to LIBCO members (3) PDP community team provides capacity building training to LIBCO (4) LIBCO purchases milk from member farmers and processes milk at the processing facility.</p>
Input	(1) Construction of facilities (2) Provision of processing equipment (3) Provision of refrigerator mini truck
Expected Achievement	(1) The project would help increase the purchase of milk up to 1,000 liter per day and processing capacity up to 500 liter per day. (2) LIBCO, Point Pedro will employ technicians. The technicians will gain the skill to operate the facility. And the facility will be able to process milk constantly with expected capacity. (3) LIBCO, Point Pedro will be enhanced its institutional capacity (4) LIBCO, Point Pedro will be a model LIBCO succeeded in milk processing business.
Target Group	(1) Around 100 member farmers supplying milk to LIBCO (2) Around 20 management staff of LIBCO (2) 3,250 member farmers (indirect beneficiaries)

#### Implementing Schedule

No.	Activities	Implementation (2010-2011)											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
1	Calling tender for contractors.		■	■	■								
2	Construction of milk processing center				■	■	■	■	■	■			
3	Purchasing of equipments								■				
4	Purchasing of mini truck											■	
5	Operation & maintenance									Conducted by Milk C			
6	Monitoring			■	■	■	■	■	■	■	■	■	
7	Evaluation												■
8	Feedback to the road map, WS											■	■

Indicator for Pilot Project Achievement	Technical Aspect	- Amount of milk processed by the milk processing facility - Technical improvement of the operators of the milk processing facility
	Institutional Aspect	- Institutional development of LIBCO in terms of progress of meetings, other activities, and recording condition - Number of employees for milk processing - Number of member farmers supplying milk to LIBCO

## 7.5 Pilot Projects in the Fisheries Sector

### 7.5.1 Integration of Community-based Fishery Management System on the District Level (FC-1)

Pilot Project Title (No.)	Integration of Community-based Fishery Management System on the District Level (FC-1)
Pilot Project Site	Jaffna District
Background	Many fishermen in Jaffna District are facing difficulties in intrusion of outer fishermen into their waters. At the same time, coastal fishing grounds are being exploited by an ever increasing number of small fishing boats. These statuses should be controlled as early as possible.



Objective	Community-based fisheries management system is well coordinated, integrated and formalized on the district level.																																																																																																																																																																						
Activities	(1) Inventory preparation for the present and past fishery regulation, self-control and traditional customs in the district. (2) Recognition and coordination of the present fishery regulation, self-control and traditional customs through workshops of FCS Unions. (3) Integration and formalization of the present fishery regulation, self-control and traditional customs through workshops of FCS Unions' Federation.																																																																																																																																																																						
Implementing System	(1) Implementing structure <div style="text-align: center;"> <pre> graph TD     DFAR[DFAR] -- Supervising --&gt; FCSUF[FCS Unions' Federation]     FCSUF --&gt; ABFCS[AB FCS Union]     FCSUF --&gt; CDFCS[CD FCS Union]     ABFCS --&gt; AFCS[A FCS]     ABFCS --&gt; BFCS[B FCS]     CDFCS --&gt; CFCS[C FCS]     CDFCS --&gt; DFCS[D FCS]     PDP[PDP Jaffna] -- Technical support --&gt; Workshops[Workshops]     Workshops -- Technical support --&gt; IR[Inventory record]           </pre> </div>																																																																																																																																																																						
Input	(1) Direct implementation (2) OJT for inventory record and workshop (3) Equipment: PC, Printer, Motor bike																																																																																																																																																																						
Expected Achievement	(1) Empowerment of FCS Unions' Federation through preparation of an inventory for the present and past fisheries regulation, self-control and traditional customs, and facilitation with FCS Unions. (2) Integration of fishery management systems which relieves fishermen threatened to operate in their waters by poachers or fishermen from outside.																																																																																																																																																																						
Target Group	(1) Around 10 management staff of FCS Unions' Federation (direct beneficiaries) (2) 7,360 fishers in DS Divisions of Jaffna, Chavakachcheri and Point Pedro (direct beneficiaries) (3) Around 11,000 fishers in Jaffna District except the above fishers (indirect beneficiaries)																																																																																																																																																																						
Implementing Schedule																																																																																																																																																																							
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">No</th> <th rowspan="2">Activities</th> <th colspan="12">Implementation (2010-2011)</th> </tr> <tr> <th>Nov.</th> <th>Dec.</th> <th>Jan.</th> <th>Feb.</th> <th>Mar.</th> <th>Apr.</th> <th>May</th> <th>Jun.</th> <th>Jul.</th> <th>Aug.</th> <th>Sep.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Contract amendment with JICA</td> <td>■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Preparation to start the activity</td> <td></td> <td>■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>Preparation of inventory form</td> <td></td> <td>■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>Sending the inventory form to all</td> <td></td> <td>■</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>Survey and record of the inventory</td> <td></td> <td></td> <td>■</td> <td>■</td> <td>■</td> <td>■</td> <td>■</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>Cordination and agreement on the Unions level</td> <td></td> <td></td> <td></td> <td></td> <td>■</td> <td>■</td> <td>■</td> <td>■</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td>Cordination and agreement on the Federation level</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>■</td> <td>■</td> <td>■</td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td>Formulation of fishery management on the District level</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>■</td> <td>■</td> <td>■</td> <td></td> <td></td> </tr> <tr> <td>9</td> <td>The Project assessment</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>■</td> <td>■</td> <td></td> </tr> <tr> <td>10</td> <td>Feed back to the Road Map</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>■</td> <td>■</td> </tr> </tbody> </table>			No	Activities	Implementation (2010-2011)												Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	1	Contract amendment with JICA	■												2	Preparation to start the activity		■											3	Preparation of inventory form		■											4	Sending the inventory form to all		■											5	Survey and record of the inventory			■	■	■	■	■						6	Cordination and agreement on the Unions level					■	■	■	■					7	Cordination and agreement on the Federation level							■	■	■				8	Formulation of fishery management on the District level								■	■	■			9	The Project assessment										■	■		10	Feed back to the Road Map											■	■
No	Activities	Implementation (2010-2011)																																																																																																																																																																					
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6	Cordination and agreement on the Unions level					■	■	■	■																																																																																																																																																														
7	Cordination and agreement on the Federation level							■	■	■																																																																																																																																																													
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9	The Project assessment										■	■																																																																																																																																																											
10	Feed back to the Road Map											■	■																																																																																																																																																										
Indicator for Pilot Project Achievement	Technical Aspect	Preparation of inventory on traditional custom, fishery regulation and self-control.																																																																																																																																																																					
	Institutional Aspect	- Holding workshop on fisheries management by FCS Unions and FCS Unions' Federation. - Recognition of FCS executives on importance of fisheries management. - Participation of DFAR to community-based fisheries management.																																																																																																																																																																					

## 7.5.2 Introducing Seaweed Farming as an Alternative Livelihood (FC-2)

Pilot Project Title (No.)	Introducing Seaweed Farming as an Alternative Livelihood (FC-2)
Pilot Project Site	Pungudutivu East
Background	The coastal fishing ground in Jaffna District could be depleted in the near future owing to ever-increasing numbers of small fishing craft that continue to exploit this fishing ground. In order to avoid depletion, we must urgently find a solution; one available possibility is district aquaculture development.
Objective	The pilot project aims at introducing the techniques of commercial seaweed ( <i>Eucheuma. sp</i> ) farming, thus it will create an alternative livelihood activity in coastal communities in Jaffna District.
Activities	(1) Awareness and training to coastal communities, (2) Rearing healthy mother plant stock, (3) Commercial scale farming, (4) Assisting for marketing, (5) Monitoring
Implementing System	<p>(1) Implementing structure</p> <pre> graph TD     DFAR[DFAR] -- Supervising --&gt; Pungdutivu[Pungdutivu East FCS]     Pungdutivu -- Supervising --&gt; Beneficiaries[Group of Beneficiaries]     Sewalanka[Sewalanka Foundation] -- Capacity building --&gt; Pungdutivu     Sewalanka -- Technical training --&gt; Beneficiaries     PDP[PDP Jaffna] -- Subcontract --&gt; Sewalanka     </pre> <p>(2) Role of organization  Pungdutivu East FCS: Supervising a target group  Sewalanka Foundation: Technical training to beneficiaries; capacity building of target CBO (FCS).  DFAR: Supervising the activity</p>
Input	(1) Subcontract to Sewalanka Foundation (2) Technical training/capacity building (3) Material of aquaculture facilities and mother plant
Expected Achievement	(1) At least 30 direct beneficiaries acquire technical knowhow for seaweed farming. (2) The seaweed farming could play a vital role in uplifting the living standards of the target fishing community where few alternative income sources exist. Additional income raised by seaweed is calculated around LKR.67,500/year per participating household. (3) Other FCS members in the target FCS would start seaweed farming, thus the pilot project contributes to absorb underemployed people in the community. (4) Target FCS obtains capacity building for management of aquaculture activity.
Target Group	(1) 31 direct beneficiaries for seaweed farming (2) 43 members of Pungudutivu East FCS for capacity building (3) 368 fishers in Pungudutivu Island (indirect beneficiaries)

### Implementing Schedule

No	Activities	Implementation (2010-2011)											
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	
1	Contract amendment with JICA	■											
2	Preparation of TOR	■	■										
3	Call for proposal		■										
4	Closing the proposal			■									
5	Evaluation and Contract negotiation			■	■								
6	Contract			■									
7	Project implementation &				■	■	■	■	■	■	■	■	■
7-1	Awareness & training			■	■	■	■						
7-2	Rearing mother plant				■	■	■	■	■	■	■	■	■
7-3	Commercial scale farming					■	■	■	■	■	■	■	■
7-4	Assistance for marketing									■	■	■	■
8	Project assesment											■	■
9	Feed-back to the Road Map											■	■
10	WS for activities after the Project											■	■

Indicator for Pilot Project Achievement	Technical Aspect	- Verification that seaweed grows in the water of Jaffna District. - Target members' acquisition of technique on seaweed farming and processing.
	Institutional Aspect	- Involvement of socially vulnerable people in the activity. - Understanding of target members and FCS executives on cost and benefit structure of seaweed farming. - Commitment of target FCS to the continuity of the activity.

### 7.5.3 Sea Cucumber Farming as an Alternative Livelihood Enhancement (FC-3)

Pilot Project Title (No.)	Sea Cucumber Farming as an Alternative Livelihood Enhancement (FC-3)
Pilot Project Site	Gurunagar, Navanthurai, Mandaithivu
Background	The coastal fishing ground in Jaffna District could be depleted in the near future owing to ever-increasing numbers of small fishing craft that continue to exploit this fishing ground. In order to avoid depletion, we must urgently find a solution; one available possibility is district aquaculture development.
Objective	The pilot project aims at confirming sea cucumber culture potential in terms of biological factor, site suitability and cost effectiveness, thus it will create an alternative livelihood activity in coastal communities in Jaffna District.
Activities	(1) Awareness and training to coastal communities, (2) Collecting spat of sea cucumber, (3) Installation of pen net for sea cucumber fattening, (4) Stocking the spat and monitoring, (5) Analyzing the growth rate and survival rate.
Implementing System	<p>(1) Implementing structure</p> <pre> graph TD     DFAR[DFAR] -- Supervising --&gt; FCSes[Three FCSes]     FCSes -- Supervising --&gt; Beneficiaries[Group of Beneficiaries]     NARA[NARA] -- Capacity building --&gt; FCSes     NARA -- Technical training --&gt; Beneficiaries     PDP[PDP Jaffna] -- Subcontract --&gt; NARA     </pre> <p>(2) Role of organization              Three FCSes: Supervising target groups              NARA: Technical training to beneficiaries; capacity building of target CBOs (FCSes).              DFAR: Supervising the activity</p>

Input	(1) Subcontract to NARA (2) Technical training/capacity building (3) Material of aquaculture facilities and spat (baby sea cucumber)
Expected Achievement	(1) About 30 direct beneficiaries acquire technical knowhow for sea cucumber fattening. (2) Success of the pilot project will create source of employment thus it is to absorb underemployed people in Jaffna District. (3) This pilot project is the first step for sustainable utilization of sea cucumber resources in the district. (4) Target FCSes obtain capacity building for management of aquaculture activity.
Target Group	(1) Around 30 direct beneficiaries for sea cucumber fattening (2) 1,569 members for FCSes of Gurunagar, St. Mary's, St. Nicholas and Mandaithivu (indirect beneficiaries)

#### Implementing Schedule

No	Activities	Implementation (2010-2011)											
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	
1	Contract amendment with JICA	■											
2	Preparation of TOR	■											
3	Call for proposal	■											
4	Closing the proposal		■										
5	Evaluation and Contract negotiation		■										
6	Contract		■										
7	Project implementation & supervision		■	■	■	■	■	■	■	■	■	■	
7-1	Awareness & training		■	■	■	■	■	■	■	■	■	■	
7-2	Collecting spat of sea cucumber			■	■	■	■	■	■	■	■	■	
7-3	Installation of net pen			■	■	■	■	■	■	■	■	■	
7-4	Stocking the spat			■	■	■	■	■	■	■	■	■	
7-5	Monitoring			■	■	■	■	■	■	■	■	■	
7-6	Analysis of the monitoring result and report writing										■	■	
8	Project assessment											■	■
9	Feed-back to the Road Map											■	■
10	WS for activities after the Project											■	■

Indicator for Pilot Project Achievement	Technical Aspect	- Verification that sea cucumber grows in the water surrounded by fish pen in Jaffna District. - Target members' acquisition of technique on sea cucumber fattening.
	Institutional Aspect	- Involvement of socially vulnerable people in the activity. - Understanding of target members and FCS executives on cost and benefit structure of sea cucumber fattening. - Commitment of target FCSes to the continuity of the activity.

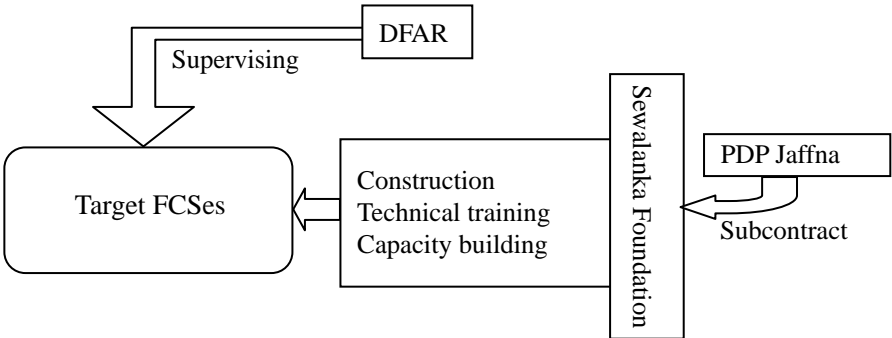
#### 7.5.4 Introduction of Fish Aggregating Device (FAD) to Small-scale Fishermen (FC-4)

Pilot Project Title (No.)	Introduction of Fish Aggregating Device (FAD) to Small-scale Fishermen (FC-4)
Pilot Project Site	Katkovalam
Background	FAD is a new technique in Jaffna District though fishermen in the south often use it. The FAD enables to establish fishing ground near shore, effective to attract pelagic species, thus it must be suitable for the present coastal fisheries in the district to diversify fishing effort and target species with less consumption of fuel.
Objective	This pilot project aims at establishing effective fishing grounds for small scale fishermen, because they access the fishing grounds of FAD easily with less consumption of fuel and enjoy more effective fish catch.
Activities	(1) Awareness programme to coastal communities (2) Construction of the device (3) Installation of the device (4) Monitoring and evaluation of the effect

Implementing System	<p>(1) Implementing structure</p> <pre> graph TD     DFAR[DFAR] -- Supervising --&gt; FCS[Katkoyalam FCS]     PDP[PDP Jaffna] -- Awareness programme --&gt; FCS     PDP -- Technical training Capacity building --&gt; FCS </pre> <p>(2) Role of organization  Katkoyalam FCS: Implementing, monitoring  PDP Jaffna: Providing technical training and capacity building, monitoring  DFAR: Supervising</p>																																																																																																																																																																						
Input	<p>(1) Direct implementation  (2) OJT of construction, installation and monitoring of FAD  (3) Material of FAD</p>																																																																																																																																																																						
Expected Achievement	<p>(1) About 30 small-scale fishers with <i>kattumaram</i> many of who are newly returned people would have their fishing ground at 1.5km from shore (their present fishing ground is at about 3km far from the shore) so that they can operate longer time at the fishing ground with easier condition.  (2) Fishermen with motorized boats are to save fuel consumption of their daily operation, and sometimes it would be protection against illegal fishing operation such as trawl fishing.</p>																																																																																																																																																																						
Target Group	<p>(1) Around 30 small-scale fishers operating with <i>kattumaram</i> in Katkoyalam FCS as direct beneficiaries  (2) Around 190 another member fishers belonged to Katkoyalam FCS as indirect beneficiaries</p>																																																																																																																																																																						
Implementing Schedule																																																																																																																																																																							
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Indicator for Pilot Project Achievement	Technical Aspect	<ul style="list-style-type: none"> <li>- Target members' acquisition of technique on FAD.</li> <li>- Target members' catch of fish around FAD.</li> <li>- Target members' improvement of income from their fishing around FAD.</li> </ul>																																																																																																																																																																					
	Institutional Aspect	<ul style="list-style-type: none"> <li>- Management and maintenance of FAD by target FCS.</li> </ul>																																																																																																																																																																					

### 7.5.5 Construction of Fish Auction Halls to Assist FCSes (FC-5)

Pilot Project Title (No.)	Construction of Fish Auction Halls to Assist FCSes (FC-5)
Pilot Project Site	Katkoyalam, Kachchai, Maravanpulo, Mandaithivu, Pungudutivu Center
Background	FCSes in Jaffna District have been weakened during prolonged internal conflict due to loss of human resources and infrastructure, and regaining of FCSes' capability is the key issue to put a fisheries development in the district into action.
Objective	The pilot project aims at activation of FCSes in Jaffna District which activities have weakened due to prolonged conflict.
Activities	<p>(1) Holding workshop to share member's interest and provide technical training.  (2) Construction of fish auction halls and other necessary facilities for fish landing.  (3) Assistance to activate the FCS's activities in relation to newly constructed facilities.</p>

Implementing System	<p>(1) Implementing structure</p>  <pre> graph TD     DFAR[DFAR] -- Supervising --&gt; FCSes[Target FCSes]     Sewalanka[Sewalanka Foundation] --&gt; FCSes     Sewalanka --&gt; Training[Construction Technical training Capacity building]     PDP[PDP Jaffna] -- Subcontract --&gt; Sewalanka   </pre> <p>(2) Role of organizations  Sewalanka Foundation: Construction of fish auction hall and other facilities, providing technical training, OJT and capacity building  DFAR: Supervising</p>																																																																																																																																																																																																																																												
Input	<p>(1) Subcontract to Sewalanka Foundation  (2) Construction of fish auction halls and other facilities for 5 FCSes  (3) Providing technical training, OJT and capacity building</p>																																																																																																																																																																																																																																												
Expected Achievement	<p>(1) The construction of fish auction halls makes post harvest technology improve easier than the present fish deal under sunshine.  (2) Target FCSes strengthen economically and socially due to opportunity of income generation such as commission from fish auction and receiving capacity building training in the pilot project.  (3) About 60 socially vulnerable people have opportunities to improve their knowledge and technique for fisheries related income sources.</p>																																																																																																																																																																																																																																												
Target Group	<p>(1) Around 700 member fishers in FCSes of Katkoyalam, Mandaithivu, Pungudutivu Center, Maravanpulo and Kachchai for construction of fish auction halls, technical training and capacity building  (2) Around 960 member fishers in FCSes of Columbuthurai, Allaippiddy and Aathikovilady for technical training and capacity building</p>																																																																																																																																																																																																																																												
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Indicator for Pilot Project Achievement	<p>Technical Aspect</p> <p>Institutional Aspect</p>	<p>- Improvement of landed fish in quality with newly constructed fish auction halls.</p> <p>- Promotion of fisheries related livelihood measures implemented by socially vulnerable members.</p> <p>- Target FCSes' operation, management and maintenance of the fish auction halls.</p>																																																																																																																																																																																																																																											

## 7.5.6 Reconstruction of Regional College of Fisheries and Nautical Engineering

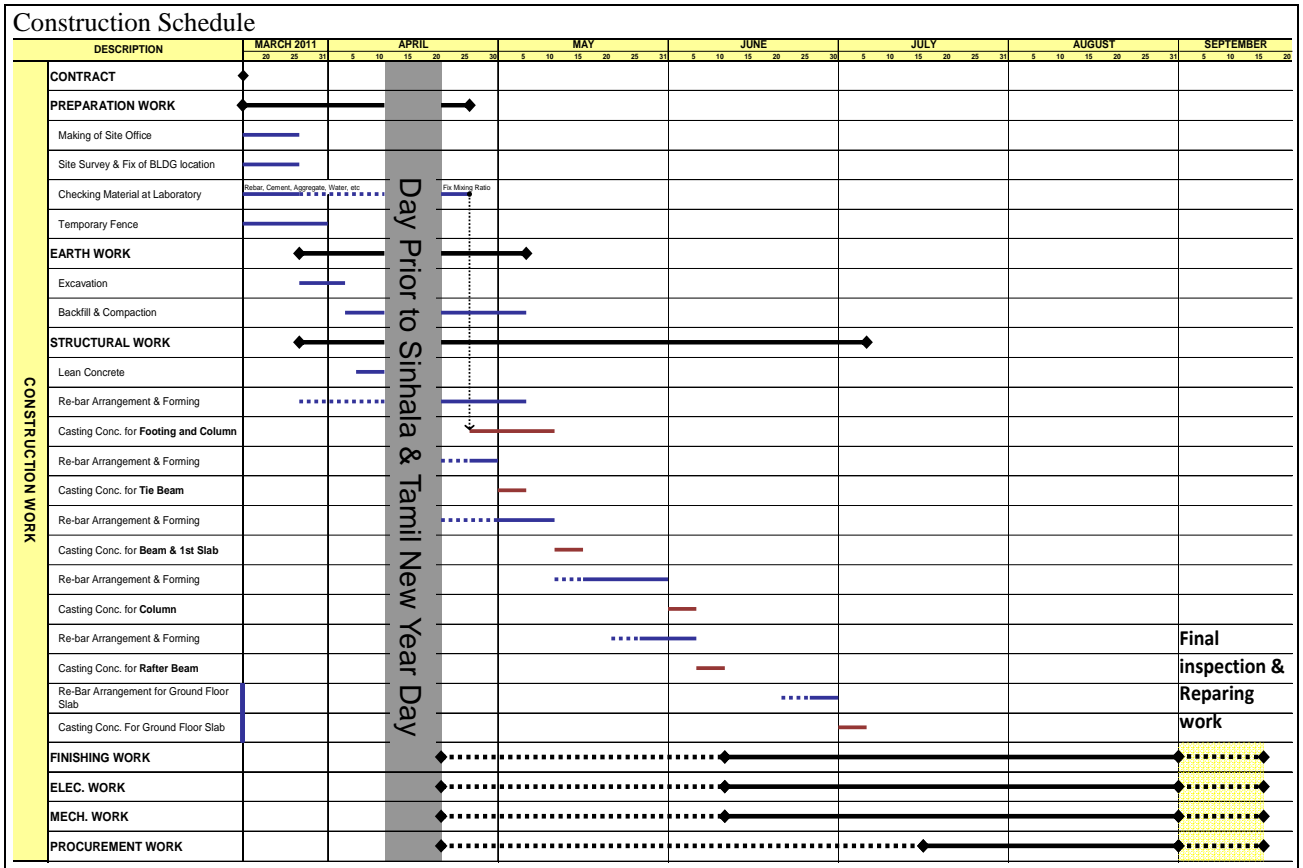
Pilot Project Title (No.)	Reconstruction of the Regional College of Fisheries and Nautical Engineering (FC-6)																																																																																																																																																																																															
Pilot Project Site	Gurunagar, Jaffna City																																																																																																																																																																																															
Background	The Fisheries College in Jaffna is expected to be the leading and prominent fisheries and nautical engineering training and education institute in Jaffna District, which is urgent requirement for fisheries development in the district.																																																																																																																																																																																															
Objective	The pilot project aims at capacity building of the college so as to be the leading and prominent fisheries and nautical engineering training and education institute in the region.																																																																																																																																																																																															
Activities	(1) Construction of school building, (2) Provision of material and equipment for training, (3) Provision of trainers' training to assist implementation of training courses.																																																																																																																																																																																															
Implementing System	<p>(1) Implementing structure</p> <pre> graph TD     NIFNE[NIFNE in Colombo] -- "Recruiting staff/Operation budget" --&gt; FC[Fisheries College, Jaffna]     JICA[JICA/Contractor] -- "Construction/Equipment" --&gt; FC     IRC[IRC Team] -- "Consultation" --&gt; JICA     CPC[CPC Team] -- "Technical training" --&gt; FC     PDP[PDP Jaffna] --- IRC     PDP --- CPC     </pre> <p>(2) Role of organizations  PDP Jaffna: Consultation for subcontract, provision of technical training  JICA/Contractor: Construction of school building, provision of training equipment  NIFNE in Colombo: Recruiting training staff to the Fisheries College in Jaffna, provision of operation budget</p>																																																																																																																																																																																															
Input	(1) IRC for consultation of construction work and provision of training equipment; direct implementation for provision of technical training (2) Construction of school building (3) Provision of training equipment and material (4) Provision of technical training																																																																																																																																																																																															
Expected Achievement	(1) Planned training programme for mobile and vocational courses related to fisheries and allied fields will cater to emerging needs in the fisheries sector. (2) Existing and novel courses will introduce new techniques such as deep-sea fishing to beneficiaries for the improvement of fish products. (3) Active implementation of mobile and vocational courses will benefit socially vulnerable people such as newly returned people, women headed families and youth who are suffered from unemployment. (4) Planned sea food processing training will improve post harvest which leads sustainable utilization of marine resources.																																																																																																																																																																																															
Target Group	(1) Around 6-8 teaching and crew staff belonged to the Fisheries College in Jaffna (2) Around 18,000 fishers and their families in Jaffna District as direct beneficiaries (3) Around 28,000 fishers in Northern Province except Jaffna District as indirect beneficiaries																																																																																																																																																																																															
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Indicator for Pilot Project Achievement	Technical Aspect	- Instructors' and trainers' acquisition of new techniques on offshore fisheries, safety navigation, sea food processing and fish farming. - Trainees' acquisition of new techniques on offshore fisheries, safety navigation, sea food processing and fish farming.
	Institutional Aspect	- Constant implementation of practical fisheries education and training for applicants of training in Jaffna District and Northern Province as well.

### Infrastructure Rehabilitation Component (IRC) of Reconstruction of Regional College of Fisheries and Nautical Engineering (FC-6)

Component Title	Reconstruction of Regional College of Fisheries and Nautical Engineering	
Objective	Original function of the Fisheries College is recovered.	
Activities	(1) Construction works for Fisheries College (2) Provision of training equipment and materials (3) Training on O&M and Office Management	
Inputs	(1) Facility: two story building with approx. 380 m <sup>2</sup> total floor area including Workshop, Lecture Hall, Food Processing / Multi Purpose Room, Computer Room / Library, Administrative Blocks, Storerooms, Washrooms, Water Supply System, and Parking Area, see Appendix 7-22: As-built Drawings (2) Equipment: 70 items including Fishing Materials, Tools, Training Equipment and Navigation Equipment, see Appendix 7-23: Equipment List (3) Education Materials: 40 items, see Appendix 7-23: Equipment List	
Indicator for IRC Achievement	Technical Aspect	Fisheries College is renovated with local quality standards Equipment and education materials are procured
	Institutional Aspect	Capacity of O&M of the Fisheries College is improved
Implementing System	<p>The Employer: JICA The Engineer: JICA Study Team The Contractor: Buildmart Lanka (PVT) Ltd.</p> <p>●Contract</p> <pre> graph LR     JICA_Sri_Lanka[JICA Sri Lanka] --- CA[Contract Agreement] --- Contractor[Contractor]     NIFNE[NIFNE] --- Witness[Witness] --- CA     CCB[CCB] --- Witness --- CA     Jaffna_GA[Jaffna GA] --- Witness --- CA   </pre> <p>●Construction</p> <pre> graph TD     JICA_Sri_Lanka[JICA Sri Lanka] -- monitoring --&gt; JICA_Study_Team[JICA Study Team as the Engineer]     JICA_Study_Team --&gt; Contractor[Contractor]     Contractor --- CW[Construction Work]     Contractor --- PW[Procurement Work]   </pre>	
Construction period	Construction Works: 15 March 2011 – 15 September 2011 Defect Liability Period: 6 months	
Procedure	<ul style="list-style-type: none"> <li>- Detailed Design and Preparation of Bid Documents: October 2010 to January 2011</li> <li>- Soil Investigation: November to December 2010</li> <li>- Pre-Qualification: December 2010</li> <li>- Distribution of Bid Documents: 31 January to 2 February 2011</li> <li>- Bid Opening: 15 February 2011</li> <li>- Contract Agreement: 15 March 2011</li> <li>- Commencement of Construction Works: 16 March 2011</li> <li>- Safety Workshop: 16 March 2011</li> <li>- O&amp;M Workshop: 5 September 2011</li> <li>- Final Inspection: 14 September 2011</li> <li>- Handing Over: 15 September 2011</li> </ul>	





## 7.6 Pilot Projects for Women in Community

### 7.6.1 Business Development and Marketing of Coir and Palmyrah Products (CC-1)

Pilot Project Title (No.)	Business Development and Marketing of Coir and Palmyrah Products (CC-1)
Pilot Project Site (Target CBO)	Velanai East, Velanai DS Division (Velanai East WRDS)
Background	<p>WRDS is appropriate channel for the empowerment of women, bringing up mutual assistant system and encouraging WHFs to participate in the societies. Though most of WRDSs maintain activities, such as regular meetings and a revolving fund system, sustainability of their activities is yet to be improved. What is more, sense of ownership within WRDS members should be developed.</p> <p>120 members were registered with the WRDS Velanai East. Around 20 members of the WRDS were engaged in producing coir products, mainly broom. Role of the WRDS was provision of equipment for coir producing and materials; coconut fiber. The women were engaged in producing brooms in the evening in the small room of the community center. However, sales of the broom seemed to be down as business of factory manufactured brooms started in Velanai. Improvement of quality and variety of the products became urgent need to continue their business, keeping unity among women that had been brought up during past years.</p> <p>More members of the WRDS wanted to have training in coir industry. Furthermore, the WRDS needed to develop skills in coir and relevant production, like palmyrah products. Besides, construction of workplace was also necessary, since they used small storeroom of the community center owned by PS Velanai, in where space was not enough to produce ropes that are high demand product by fishermen in the area.</p> <p>Institutional development and promotion of social inclusion are improved through livelihood development project that is the highest need for the WRDS members.</p>

Objective	Empower Woman Rural Development Society (WRDS) by addressing one of the most pressing women's needs in the villages— income generation																																																																																																		
Activities	(1) Capacity development training for WRDS active members (2) Training in producing coir & palmyrah products and marketing for selected WRDS members, including provision of necessary equipment (3) Improvement of working center for coir industry (semi permanent building)																																																																																																		
Implementing System	(1) Implementation structure <div style="text-align: center;"> </div>																																																																																																		
	(2) Roles of the stakeholders The pilot project was implemented by PDP Jaffna in collaboration with selected Implementation Partner (NGO, JSAC). The Implementation Partner carried out the activities with participation of the WRDS, while PDP Jaffna had responsibility for overall monitoring. Industry Development Board (IDB) was invited as a resource organization to deliver skill training in coir industry and palmyrah producing by the Implementation Partner. Relevant organizations, such as Divisional Secretary (DS), Rural Development Officer (RDO) and Grama Niladari (GN) were encouraged to be involved in the project.																																																																																																		
Input	(1) Contract with Implementation Partner (NGO;JSAC) (2) Capacity building Training (3) Technical training (coir and palmyrah production) and provision of tools/equipment for coir production (4) Construction of center for coir industry																																																																																																		
Expected Achievement	(1) Institutional development of the WRDS (Availability of proper meeting minutes, assets of WRDS with operation system) (2) Improvement livelihood measures by assistance for improvement of coir industry and palmyrah products producing through WRDS (20 more members get skills in coir production/10 members get skills in palmyrah production)																																																																																																		
Target Group	20 members from Velanai East WRDS are direct beneficiaries of skill training 10 members from WRDS will be targeted for capacity development training.																																																																																																		
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Indicator for Pilot Project Achievement	Technical Aspect	(1) Available skills to produce coir and palmyrah products (2) Income by coir and palmyrah producing (3) Usage of the working place (center)																																																																																																	
	Institutional Aspect	(1) Management skills (Meetings and participants, condition of record keeping) (2) Assets of the WRDS and their maintenance system (3) Issues over the WRDS and countermeasures																																																																																																	

## 7.6.2 Business Development and Marketing for Food-processing Products (CC-2)

Pilot Project Title (No.)	Business Development and Marketing for Food-processing Products (CC-2)
Pilot Project Site(Target CBO)	Puloli South (Singanagar) , Point Pedero DS Division (Puloli South WRDS, Point Pedero DS Division)
Background	<p>WRDS is appropriate channel for the empowerment of women, bringing up mutual assistant system and encouraging WHFs to participate in the societies. Though most of WRDSs maintain activities, such as regular meetings and a revolving fund system, sustainability of their activities is yet to be improved. What is more, sense of ownership within WRDS members should be developed.</p> <p>Palmyrah processed items are special products in the Singarnagar, Point Pedero. Many women of Singarnagar WRDS produce Palmyrah sweet product or Jaggery. They succeeded in expanding their market with a support of PAMPPII; micro finance project implemented by the Central Bank of Sri Lanka (CBSL), in 2010. CBSL coordinated with Cargills (Ceylon) PLC, together with Bank of Cylon to create markets for local products, along with promoting group saving and crediting. Around 20 WRDS members worked together for producing Jaggery, improving quality of the products so as to meet the order from Cargills. This was significant achievement because the women obtained not only economical improvement but also social recognition. However, following problems were observed.</p> <ol style="list-style-type: none"> <li>1) Quality control They needed a more technical instruction and advice. In addition, common production center was necessary, since they used old rental house temporally.</li> <li>2) Mobilisation/capacity development They were necessary to develop system for decision making, information sharing and accounting capacity.</li> <li>3) Expansion of benefit among WRDS members The WRDS was recommended thinking about expanding benefit to other members. Common production centre could provide WRDS with working space for more numbers of women. Besides, if the WRDS could collect small amount for usage of the centre, the income would be used for other members' benefit.</li> </ol> <p>Institutional development and promotion of social inclusion are improved through livelihood development project that is the highest need for the WRDS members.</p>
Objective	Empower WRDS by addressing one of the most pressing women's needs in the villages—income generation
Activities	<ol style="list-style-type: none"> <li>(1) Capacity development training for the WRDS active members</li> <li>(2) Skill training in producing palmyrah sweet for selected WRDS members, including provision of necessary tools for palmyrah production</li> <li>(3) Improvement of working center for palmyrah sweet production</li> </ol>
Implementing System	<p>(1) Implementation structure</p> <pre> graph TD     DS[District Secretary Jaffna] --- DS1[DS(PPD), RDO, GN]     DS --- PDP[PDP/Jaffna]     DS1 -- Support --&gt; WRDS     PDP &lt;--&gt; Contract  IP[Implementation partner]     PDP -- Monitoring --&gt; WRDS     IP -- Facilitation Training --&gt; WRDS     WRDS &lt;--&gt; Support  PAMPPII_group([PAMPPII group])     PAMPPII[PAMPPII] -- Support --&gt; PAMPPII_group     </pre> <p>(2) Roles of the stakeholders</p> <p>The pilot project was implemented by PDP Jaffna in collaboration with selected Implementation Partner (NGO, SOND). The Implementation Partner carried out the activities with participation of the WRDSs, while PDP Jaffna had responsibility for overall monitoring. Relevant organizations, such as Divisional Secretary (DS), Rural Development Officer (RDO) and Grama Niladari (GN) were encouraged to be involved in the project.</p>

Input	(1) Contract with Implementation Partner (NGO) (2) Capacity building Training (3) Technical training (palmyrah sweet production) and provision of tools/ equipment for palmyrah sweet production (4) Construction of center for coir industry	
Expected Achievement	(1) Institutional development of the WRDS (Availability of proper meeting minutes, financial record, assets of WRDS with operation system) (2) Improvement livelihood measures by assistance for food processing, especially palmyrah sweet producing through WRDS (number of ex-trainees in business development training and palmyrah sweet production training)	
Target Group	- 20 -30 members from Puloli South (Singanagar) WRDS are direct beneficiaries of skill training in palmyrah production - 10 members from WRDS will be targeted for capacity development training.	
Implementing Schedule		
No.	Activities	Implementation (2011)
		Feb Mar Apr May Jun Jul Aug
1	Awareness program on the Pilot Project	
2	Selection of participants in the trainings	
3	Preparation of action plan	
4	Capacity development trainings	
5	Technical training in palmyrah sweet production	
6	Provision of equipment and tools	
7	Construction of center for palmyrah sweet production	
8	Handing over	
9	Monitoring	
Indicator for Pilot Project Achievement	Technical Aspect	(1) Available skills to produce palmyrah sweet products (2) Income by palmyrah sweet producing (3) Usage of the working place (center)
	Institutional Aspect	(1) Management skills (Meetings and participants, condition of record keeping) (2) Assets of the WRDS and their maintenance system (3) Issues over the WRDS and countermeasures

### 7.6.3 Promotion of Mushroom Cultivation Business (CC-3)

Pilot Project Title (No.)	Promotion of Mushroom Cultivation Business (CC-3)
Pilot Project Site(Target CBO)	Aththiady ,Jaffna DS Division (Aththiady WRDS, Jaffna DS Division)
Background	<p>WRDS is appropriate channel for the empowerment of women, bringing up mutual assistant system and encouraging WHFs to participate in the societies. Though most of WRDSs maintain activities, such as regular meetings and a revolving fund system, sustainability of their activities is yet to be improved. What is more, sense of ownership within WRDS members should be developed.</p> <p>Mushroom growing was promoted by Development of Agrarian Development (DAD) recently. It has potential to expand women's opportunity of home industry. However, some issues were observed to promote mushroom growing, such as difficulties to procure sawdust that is used to make seedbed of mushroom and marketing problems.</p> <p>14 women had been trained in mushroom cultivation last year by DAD. 6-7 ex-trainees had engaged in the cultivation in their houses, while others gave it up.</p> <p>The WRDS members showed their willingness to tackle with the mushroom production again as Attiyady had an advantage to sell mushroom because of its convenient access to the town. DS, Jaffna emphasized the importance to promote marketing measures.</p> <p>Institutional development and promotion of social inclusion are improved through livelihood development project that is the highest need for the WRDS members.</p>

Objective	Empower WRDS by addressing one of the most pressing women's needs in the villages—income generation							
Activities	(1) Capacity development training for WRDS active members (2) Improvement of revolving loan system (3) Skill training in mushroom cultivation for selected members (4) Provision of mushroom cultivation kits to the WRDS (5) Promotion of mushroom marketing measures (6) Strengthening network with mushroom cultivators							
Implementing System	<p>(1) Implementation structure</p> <p>(2) Roles of the stakeholders The pilot project was implemented by PDP Jaffna with participation of the WRDSs. The DOA was the most important stakeholder to provide technical support for mushroom cultivation. Relevant organizations, such as Divisional Secretary (DS), Rural Development Officer (RDO) and Grama Niladari (GN) were encouraged to be involved in the project implementation. Mushroom society that was involved in CPC agriculture project was also stakeholder to provide practical information on mushroom cultivation for the WRDS.</p>							
Input	(1) Capacity building training (2) Materials and equipment for mushroom cultivation (3) Training support for mushroom cultivation (Hiring vehicle, etc)							
Expected Achievement	(1) Institutional development of the WRDS (Availability of proper meeting minutes, financial record, number of meetings of WRDS) (2) Improvement livelihood measures by promotion of mushroom cultivation through WRDS (more 10 members get skills in mushroom growing)							
Target Group	- 24 members in total beneficiaries for assistance for mushroom cultivation ( 14 members: women who had received previous training, 10 members: women who want to start mushroom cultivation) - Active WRDS members (10~15 ) for capacity development programme							
Implementing Schedule								
No.	Activities	Implementation (2011)						
		Jan	Feb	Mar	Apr	May	Jun	Jul
1	Mobilization of the program							
2	Selection of participants							
3	Workshop to prepare action plan							
4	Capacity development trainings							
5	Cross cutting visit to active mushroom farmers							
6	Technical training in mushroom growing							
7	Provision of mushroom cultivation set							
8	Marketing promotion strategy making (colletion center)							
9	Promotion of materials procurement							
10	Monitoring							

Indicator for Pilot Project Achievement	Technical Aspect	(1) Available skills for mushroom cultivation (2) Income by mushroom cultivation (3) Available network related to mushroom cultivation and sales (4) Usage of the collection center
	Institutional Aspect	(1) Management skills (Meetings and participants, condition of record keeping) (2) Assets of the WRDS and their maintenance system (3) Issues over the WRDS and countermeasures

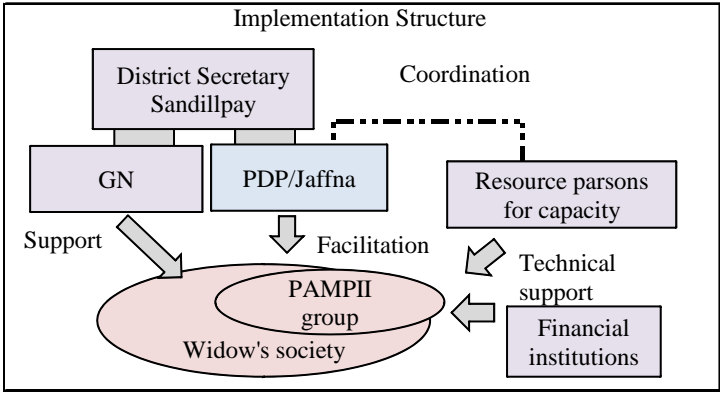
#### 7.6.4 Small-scale Business Development (Poultry) (CC-4)

Pilot Project Title (No.)	Small scale Business Development (Poultry) (CC-4)
Pilot Project Site(Target CBO)	Sirupidy , Kopay DS Division/ Thavalai Iyattalai , Chavakachcheri DS Division Sirupidy WRDS, Kopay DS Division, / Thavalai Iyattalai WRDS , Chavakachcheri DS Division
Background	<p>WRDS is appropriate channel for the empowerment of women, bringing up mutual assistant system and encouraging WHFs to participate in the societies. Though most of WRDSs maintain activities, such as regular meetings and a revolving fund system, sustainability of their activities is yet to be improved. What is more, sense of ownership within WRDS members should be developed.</p> <p>Poultry farming is one of the most popular side businesses for rural women. In many cases, it can produce just extra money and sometimes it is only for domestic consumption. However, it still has much potential to get income or food items without having special skills. Especially local chicken is more recommendable than farm chicken since farm chicken is susceptible to deceases. Besides, local chicken is marketable more than farm chicken due to its superior taste. Department of Animal Production and Health (DAPH) has made effort to promote poultry farming with local chickens.</p> <p>WRDS members in Sirupidy and Thavalai Ijattalai villages; farming villages, expressed their willingness to promote poultry farming to support livelihood measures.</p> <p>Institutional development and promotion of social inclusion are improved through livelihood development project that is the highest need for the WRDS members.</p>
Objective	Empower WRDS by addressing one of the most pressing women’s needs in the villages—income generation
Activities	(1) Capacity development training for the WRDS active members (2) Improvement of revolving loan system (3) Skill training in poultry farming for selected WRDS members (4) Provision of local chicks and other items for poultry farming to the WRDSs
Implementing System	<p>(1) Implementation structure</p> <pre> graph TD     DS[District Secretary Jaffna] --- DS_Support[DS, PPDR, RDO, GN Support]     DS --- PDP[PDP/Jaffna Monitoring]     PDP -.-&gt; Contract  IP[Implementation partner]     IP --&gt; Facilitation  WRDS((WRDS))     DAPH[DAPH Support] --&gt; Support  WRDS     DAPH -.-&gt; Coordination  IP   </pre> <p>(2) Roles of the stakeholders</p> <p>The pilot project was implemented by PDP Jaffna in collaboration with selected Implementation Partner (NGO; JSAC). The Implementation Partner carried out the activities with participation of the WRDSs, while PDP Jaffna had responsibility for overall monitoring. The DAPH was the most important stakeholder to support sustainable poultry farming. Relevant organizations, such as Divisional Secretaries (DSs), Rural Development Officers (RDOs) and Grama Niladaris (GNs) were encouraged to be involved in the project implementation by PDP JAFFNA and the Implementation Partner.</p>

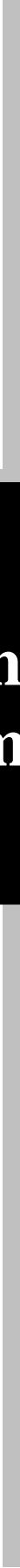
Input	(1) Contract with Implementation Partner (NGO) (2) Capacity building Training (3) Technical training (poultry farming) (4) Provision of local chicks and other items for poultry farming								
Expected Achievement	(1) Institutional development of the WRDS (Availability of proper meeting minutes, financial record, number of meetings of WRDS, amount of community assets) (2) Improvement livelihood measures by assistance for improvement of poultry farming through the WRDSs (40 women get proper knowledge of poultry farming)								
Target Group	- 40 women (20 from each WRDS) for income generation activities - 20 women (10 from each WRDS) for capacity development programme								
<b>Implementing Schedule</b>									
No.	Activities	Implementation (2011)							
		Fev	Mar	Apr	May	Jun	Jul	Aug	
1	Awareness program on the Pilot Project								
2	Selection of beneficiaries of the poultry farming								
3	Preparation of action plan								
4	Capacity development trainings								
5	Technical training in poultry farming								
6	Promotion of vaccination for chicks								
7	Provision of chicks, shed and feeding equipment								
8	Strengthening of revolving fund								
9	Handing over								
10	Monitoring								
Indicator for Pilot Project Achievement	Technical Aspect	(1) Available skills of poultry farming (2) Income by poultry farming (3) Any changes occurred by improvement of poultry farming							
	Institutional Aspect	(1) Management skills (Meetings and participants, condition of record keeping) (2) Assets of the WRDS and their maintenance system (3) Available fund with WRDS & management of revolving fund (4) Issues over the WRDS and countermeasures							

### 7.6.5 Support for the Widows' Society (CC-5)

Pilot Project Title (No.)	Support for the Widows' Society (CC-5)
Pilot Project Site (Target CBO)	Chavatkaddu, Sandilipay DS Division (Chavatkaddu Widow's Society, Sandilipay DS Division)
Background	<p>Widows in Jaffna are confronted with not only economical difficulties but also social discrimination. Special attention should be paid to improve their socio economic status. Urgent need of the WHFs is recovery of earning measures to make a living. Common earning measures of widows are small businesses, such as running of retail shop, dressmaking and food processing. Many of them are difficult to improve their business because of scarcity for investment and lack of skills.</p> <p>Chavatcaddu Widows' society was strengthened with strong woman's leadership, overcoming numerous hardships. It had been almost neglected in the village at the beginning stage, but the society obtained reputation and recognition from the community. However, it seemed necessary to bring up more leaders to promote sustainability of the society since most of members almost depend on the leader.</p> <p>PDP Jaffna introduced PAMPPII to Chavatcaddu Widows' society with the aim at promoting access to formal financial institution. 20 members embarked on group saving activities. However, it seemed necessary to strengthen field mobilization and awareness for the participants for sustainable activities.</p>
Objective	Empower a Widow's Society by improving access to financial services and institutional capacity development
Activities	(1) Capacity development training (2) Coordination with the existing microfinance schemes (3) Field mobilization for the promotion of microfinance activities

Implementing System	<p>(1) Implementation structure</p>  <p>(2) Roles of the stakeholders The pilot project was facilitated by PDP Jaffna. PDP Jaffna mobilized women's group and coordinated with the financial institution to promote micro finance activities. Capacity development programmes were provided for the society members in collaboration with appropriate human resources who had good understands on widows' issues and potential. Grama Niladari (GN) was encouraged to be involved in the project.</p>																																																														
Input	<p>(1) Capacity building training (2) Social event/study tour (3) Human resources for mobilization to promote micro finance activities</p>																																																														
Expected Achievement	<p>(1) Institutional development of the society (Availability of proper meeting minutes) (2) Improvement of access to financial institution for strengthening women's livelihood measure (number of women who apply loan, number of women who posses bank account)</p>																																																														
Target Group	<p>- 20 women for micro finance activities - 0 women for capacity development activities (members of the Society)</p>																																																														
Implementing Schedule																																																															
	<table border="1"> <thead> <tr> <th rowspan="2">No.</th> <th rowspan="2">Activities</th> <th colspan="7">Implementation (2011)</th> </tr> <tr> <th>Fev</th> <th>Mar</th> <th>Apr</th> <th>May</th> <th>Jun</th> <th>Jul</th> <th>Aug</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mobilization of the program</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Study on availble microfinance schemes</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>Introduce of micro finance schemes</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>Field mobization of introduced micro finance activities</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td>Conducting Capacity development programs</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	No.	Activities	Implementation (2011)							Fev	Mar	Apr	May	Jun	Jul	Aug	1	Mobilization of the program								2	Study on availble microfinance schemes								3	Introduce of micro finance schemes								4	Field mobization of introduced micro finance activities								5	Conducting Capacity development programs								
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Indicator for Pilot Project Achievement	<p>Technical Aspect</p> <p>Institutional Aspect</p>	<p>(1) Knowledge on micro finance among the members (2) Available access to financial institutions</p> <p>(1) Management skills (Meetings and participants) (2) Types and number of stakeholders</p>																																																													





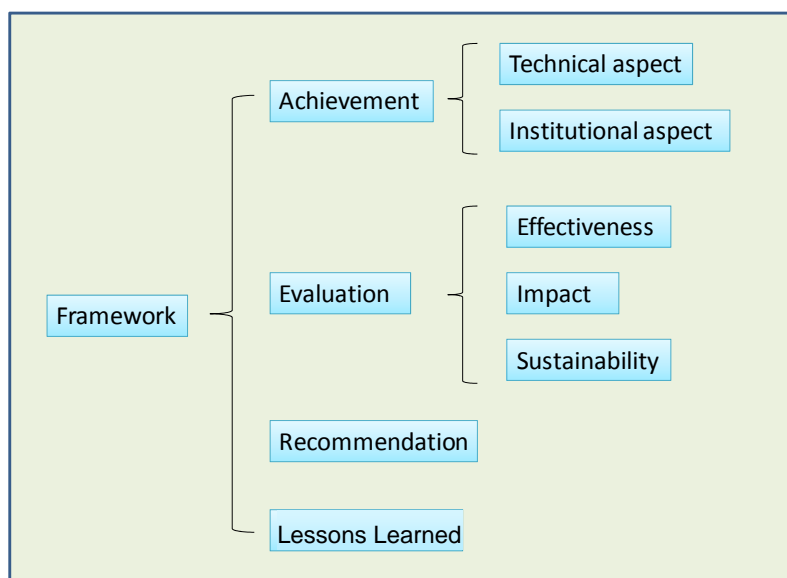
**Chapter 8**  
**Monitoring and Evaluation of  
and Lessons Learnt from  
Pilot Projects**

## Chapter 8 Monitoring and Evaluation of and Lessons Learned from Pilot Projects

### 8.1 Framework of Monitoring and Evaluation

As introduced in Chapter 7, PDP Jaffna implemented 17 pilot activities in the three development sectors, consisting of six pilot projects in the agriculture sector, six in the fisheries sector, and five in community development sector. The Team monitored and evaluated these 17 pilot projects with the following framework:

The framework of monitoring and evaluation is composed of four elements; i.e., Achievement, Evaluation, Recommendation, and Lessons learned (Figure 8-1). Achievement is how much the Pilot Projects have achieved their objectives in terms of technical and institutional aspects. The pilot project summaries written in Chapter 7<sup>1</sup> list indicators for respective pilot project achievement in technical and institutional aspects. The Team monitored the achievement in accordance with these indicators.



**Figure 8- 1: Framework of Monitoring and Evaluation**

The Team evaluated the Pilot Projects by three indicators of effectiveness, impact, and sustainability. First, effectiveness means an extent objective of each pilot project has been achieved. The Team evaluated it in reference to indicators in the pilot project summaries in Chapter 7. Second, impact shows any positive or negative changes generated to the beneficiaries, their families, and/or communities directly or indirectly through implementation of the pilot project. The Team also evaluated the impact of how much of the project objective has been achieved; i.e., to assist local people of Jaffna District, including IDPs, and to strengthen CBOs. Third, sustainability shows the sustainability of development effect and benefits after the end of PDP Jaffna. The Team evaluated sustainability in terms of institutional aspect, financial aspect and technical aspect.

<sup>1</sup> Please see '7.4 Pilot Projects in the Agriculture Sector,' '7.5 Pilot Project in the Fisheries Sector,' and '7.6 Pilot Projects for Women in the Community'

Next, recommendation shows suggestions, advice, and/or specific measures in connection with the pilot projects, which include contributing and/or impeding factors to the success of the pilot projects, and recommendations to the pilot projects to secure sustainability and expand their impact. Finally, lessons learned shows any matters which was learnt from implementation of the pilot projects and is useful for the formulation of Road Maps as well as useful for formulation, operation and management of future projects. The Team monitored the achievement of each pilot project with the two indicators, and evaluated in accordance with the measures mentioned with three indicators.

## 8.2 Baseline Survey for Pilot Projects

The team conducted a baseline survey for the Pilot Projects by contracting out the survey to an NGO, Consortium of Humanitarian Agencies in February to March, 2011. The survey intended to study the current socio-economic situations of the target communities, to collect information on performance indicators, and to analyze the characteristics of the communities from a political, economic, social, and security perspective. The baseline survey also analyzed the possible effects of the pilot projects for the communities and provided recommendations for project implementation. The major findings of and the recommendations based on the survey are as follows.

### (1) General Information of the Target Communities

1. **Infrastructure:** With regard to the availability of infrastructures such as electricity service, water supply, and road, they varied among the communities. Punkuduthivu had the poorest infrastructure and was without electricity, piped water supply, private or common wells nor sanitary facilities. No electricity service was available in Mandathivu, either. Several other communities were without piped water supply; however, they had private or common wells. All main roads were connected to the communities via village roads.
2. **Land Use:** The residential area ranged between 25% and 98% of target communities. In Punkuduthivu, Katkivalam, and Udayaooriyan areas, 20-30% of the land was designated as abandoned areas, and 20% of the land was designated for restricted use in Mandathivu.
3. **Donor Support:** The CBOs received a wide range of financial support for livelihood development. The total amount of support was the highest in Gurunagar (LKR 7,160,000 for fishing nets) followed by Navanthurai (LKR 6,000,000 for fishing devices). However, six CBOs had not received any livelihood-related assistance.
4. **Socially Vulnerable People:** There were six communities with more than 20% of IDPs/returnees among the total population. They lived in Velanai, Point Pedro, and Chavakachcheri DS Divisions. Majority of them (44%) lived in donated houses. Further, 47% of IDPs/returnees were still living in temporary shelters on their land, in shelters on some other person's land, or in their relatives' houses.

### (2) CBO-based Performance Indicators

CBO-based performance indicators were set for four aspects; i) capacity development of community, ii) livelihood, iii) capacity development of government officers, and iv) social inclusion. They were utilized

to monitor and evaluate the Pilot Projects during and after the implementation, detailed results of which are explained from the next Section 8.3. The major findings of CBO-based performance indicators are as follows.

1. **Meetings:** General and committee meetings were held regularly at majority of the CBOs. However, Katkovalam FCS and Mushroom Producer's Society had no record of conducting committee meetings.
2. **Record Keeping:** Majority of the CBOs maintained meeting minutes, but six FCSes and one WRDS had not maintained attendance records. Katkovalam FCS and Singanagar WRDS had no financial record.
3. **Property:** Further, 37% of the CBOs owned a building for their community activities. Two FCSes had a refrigerator. In the meantime, all five WRDSs had no property such as a building, land, office furniture, and so on. Mushroom Producer's Society did not own any asset, whereas the other two agricultural societies were well equipped.
4. **Financial Capital:** Even though more than a half of the CBOs earned a regular income, two FCSes, four WRDSs, and two agricultural societies had no regular income. It showed their institutional weakness with regard to outlining activities to support their members. In contrast, LIBCO, Gurunagar FCS, and St. Mary's FCS had a considerable amount of financial capital from selling products.
5. **Livelihood:** Livelihood activities were carried out in all FCSes. The monthly income of people in certain occupations such as fishing (ownership), fish processing, retailing, and net owner was more than LKR 25,000 per month. The members in agriculture societies earned LKR 9,000 to 19,000 per month. The livelihood of WRDS members was relatively lower than the livelihood of people in other sectors; the WRDS members earned LKR 3,000 to LKR 5,000 per month.
6. **Involvement of Government Officers:** FIs and AIs or LDO visited the target CBOs once a week. RDOs visited WRDSs only once a month because several societies had to be covered. The surveyor advised that some FIs need to closely communicate with the project staff because they had a limited understanding between them. The knowledge and experience related to the new technology for seaweed farming, sea cucumber farming, and FAD could be developed throughout the pilot project. The Mango growing technique could also be extended to AI.
7. **Social Inclusion:** The involvement of IDPs/returnees was high in fishing communities. WRDSs involved many widows in their activities. Social inclusion was also active in Mushroom Producer's Society in the agriculture sector.

### (3) Situation Analysis

1. **Jaffna District:** Jaffna District comprised predominantly Tamil with a sizable Hindus and Christian population. Owing to the conflict, approximately, 130,000 people left the district since 1980s, but the surveyor concluded that it is doubtful that they would return since the majority of them have settled in other districts or in foreign countries. With regard to security, certain areas did not allow the resettlement of IDPs because of the restricted areas.
2. **Target Communities:** Some vulnerable groups such as PWSN and WHFs tend to developed

psychological problems. IDPs also faced problems such as a change in their occupational patterns and the loss of livelihood assets. Prohibition of monofilament and trawlers by the government affected the fishermen's income. With regard to security, Indian trawlers and obtaining a pass for fishing were the concerns of the local people.<sup>2</sup>

(4) Recommendations

1. All members in certain societies were not very active. In order to make them more active, additional time can be spent on creating awareness.
2. The maintenance of records and financial accounting can be improved. It was suggested that the executive members of the CBOs can be trained in order to create awareness on the various aspects of institutional management.
3. The CBOs with weak financial capacities can be strengthened by introducing them to income generation activities and enhancing their subscriptions. Exchange programmes can be planned for financially weaker societies, and they would visit stronger societies and learn from them.
4. With regard to social inclusion, the performance indicator attempted to capture the participation of vulnerable groups in the training programmes or activities. If the initiatives were specially designed for the vulnerable groups, participation can be higher.
5. The activities of the WRDS were basically traditional in nature. Although the activities may generate some income, they may not create a large positive impact. It was strongly suggested that new technologies can be introduced to the traditional activities undertaken by these WRDS. This would increase the participation of women in particular and of the youth and help to enhance their income.

### 8.3 Monitoring, Evaluation and Lessons Learned in the Agriculture Sector

#### 8.3.1 Pilot Project AC-1

Pilot Project Title (No.)	Strengthening of Seed Production Cooperative Society (AC-1)	
Achievement	Technical aspect	<p>(1) Amount of quality seed supplied by SEEDCO  <b>At the beginning:</b> 4,500 bushels of seed paddy per year. According to the records of operators, on average, around 60 bushels of seed paddy were being processed per day.  <b>At the end:</b> Since the daily seed processing capacity was increased by more than three times that as compared with the manual operation, more than 10,000 bushels of seed paddy are expected to be processed per year.</p> <p>(2) Technical improvement of SEEDCO on operation and maintenance of seed processing facility  <b>At the beginning:</b> SEEDCO did not have the technical know-how of the seed processing facility.  <b>At the end:</b> The technical operators of SEEDCO had been trained on how to operate and maintain the facility and they were performing according to instruction. Prior to operation, the seed grader is checked and lubricants are applied in a regular manner in order to keep it in good operating condition.</p>

<sup>2</sup> As of July 2011, this pass system has been abolished.

	Institutional aspect	<p>(1) Involvement of member farmers in seed production and operation of seed processing facility  <b>At the beginning:</b> 62 contract growers (seed paddy)  <b>At the end:</b> 104 contract growers (seed paddy)</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - Increase the quantity as well as improve the quality of paddy and vegetable seeds to be distributed to farmers in the district:  A purity test conducted by PDP Jaffna indicated that the percentage of good grain in the sample seed paddy was increased from 60% (manual operation) to 96% (seed grader). The quality of seed paddy was improved to a remarkable extent compared to the prior method, manual processing.  As mentioned above, the quantity of paddy seed processed by SEEDCO was expected to be more than double that of the prior operation. Therefore, the objective of the pilot project was achieved.  Since vegetable seeds (in general OFC seeds) were supplied in a limited amount, so far SEEDCO has not used the machine to process the OFC seeds.</p> <p>(2) Effects of external factors:  No serious issues related to this project.</p>
	Impact	<p>(1) Achievement of the Project objective – Assist local people of the district, including IDPs, and strengthen CBOs:  This new facility was open to local farmers to process their own seed and thereby gain advantage. Cleaned seeds would be supplied to returnees, and they received good quality seeds.</p> <p>(2) Expected impact other than the project objective:  There were several positive impacts reported by concerned people of SEEDCO.</p> <p>a) Contract growers of SEEDCO:  - The contract growers received cleaned seeds without any inert matters and weed seeds. They stated that cost for agronomic practices would be less than that for unprocessed seed, whereby they can harvest it with lower production cost.</p> <p>b) General Manager of SEEDCO  - A stable income source has been installed to SEEDCO, whereby SEEDCO’s financial status was expected to improve.  - All farmers were expected to be encouraged to clean their seeds by this facility to obtain quality seed.</p> <p>c) Operators of SEEDCO  - An income source has been generated to support their livelihood.  - They learned the technical know-how of Seed Processing Machinery.</p>
	Sustainability	<p>(1) Institutional aspect:  SEEDCO consists of a seed processing unit, a store, a working unit, a drying unit, an administration unit, and a vegetable garden (1 ac). As far as seed paddy production is concerned, SEEDCO is sustainable. The extent of the vegetable garden is not enough to produce the required amount of OFC seeds, which is a long-term need of SEEDCO.</p> <p>(2) Financial aspect:  The stable income source for SEEDCO has been established. According to the operation plan of SEEDCO, this facility is expected to be operated 210 days of the year and net profit is expected to be LKR 394,000. This represents a remarkable portion of the total net profit of SEEDCO.</p> <p>(3) Establishment and prevalence of technical aspect:  - SEEDCO has skill to operate and maintain seed processing machinery and technology to produce quality seeds without any inheritance losses.</p>

Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- SEEDCO's cooperation and its positive &amp; timely responses: The management committee of SEEDCO immediately agreed to finance for three phase supply even though it was not included in the project proposal. This was good decisiveness of SEEDCO.</li> <li>- Reasonable price (LKR. 40 per bushel) has been fixed by SEEDCO for paddy processing and this is affordable for farmers. Therefore, farmers will start to clean not only seed paddy but also other paddy which are kept in storage for processing.</li> <li>- Recently DOA announced via local newspaper and made awareness among farming population about the seed processing facility. The DOA claimed that 20% of yield increase would occur when cleaned paddy seeds are sown.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Construction was delayed due to difficulty of procuring sand. In addition, a special brick bed was installed to absorb vibration during operation of seed grader. Getting bricks on time was also difficult to the contractor during the installation, therefore it got delayed.</li> <li>- The supplier of the seed processing machine does not have its branch in Jaffna. If seed grader shows any malfunction, it cannot be immediately repaired as technical expertises have to come from Colombo. It will make delay in operation.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- SEECO should appoint relevant staff permanently for its smooth functioning. DCD is advising SEEDCO and DOA to recruit officers for administration &amp; financial purpose, field work, store maintenance and other ordinary works.</li> <li>- Processing should be expanded to OFC seeds as well. Production of OFC seeds should be expanded to meet the local demand. Since SEEDCO suffers to get land for OFC seeds production, it is advisable to incorporate more contract growers for OFC seeds production temporarily.</li> <li>- Provision of truck is advisable to do transportation from field to SEEDCO and vice versa. This will ease the process of seed distribution to all ASC throughout the district.</li> </ul>
Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- SEEDCO had been managed and operated with the strong backup of DOA, providing institutional stability to SEEDCO.</li> <li>- To secure the stable supply of quality seed, SEEDCO should be further equipped with cold storage facilities and a seed testing unit, etc.</li> </ul>

### 8.3.2 Pilot Project AC-2

Pilot Project Title (No.)	Strengthening of Agricultural Extension Services (AC-2)	
Achievement	Technical aspect	<p>(1) Number of trainees  <b>At the beginning:</b> 0  <b>At the end:</b> 997</p> <p>(2) Change of pre-post test result  <b>At the beginning</b> (Mean score of Pre test): 23.4%  <b>At the end</b> (Mean score of Post test): 45.9%            Therefore, progress – up 22.5%</p> <p>(3) Feedback from trained farmers            There were several positive feedbacks from the participants;</p> <ul style="list-style-type: none"> <li>- They well understood about how to select suitable crop varieties according to the soil type.</li> <li>- This was the first time they had studied Banana Dense Planting; they felt this was an innovative cultivation technology.</li> <li>- They could identify plant symptoms clearly and grasped knowledge to differentiate nutrient deficiency from infection.</li> <li>- Since most of the training subjects were useful technologies for the farmers, they said it was a good opportunity to study them.</li> </ul>
	Institutional aspect	<p>(1) Improvement of trainers' knowledge            Staff members of DOA have developed their training capacity and knowledge through this pilot project. Most of them went audio visual training at the audio visual training center, Gannoruwa, Kandy and thereby grasped knowledge on handling electronic teaching aids and displaying information in a scientific manner.</p>

Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - Strengthen the agriculture extension services via providing audio visual equipment and quality training: The results of pre-post test and feedback from participated farmers indicates that the training programmes conducted by the pilot project fulfilled the requirement of farmers and satisfied the objective of the pilot project.</p> <p>(2) Effects of external factors: No serious issues have been reported.</p>
	Impact	<p>(1) Achievement of the Project objective – Assist local people of the district, including IDPs, and strengthen CBOs: A total of 997 farmers participated in the training programme; among them, total number of female participants – 440; total number of male participants – 557 and total number of IDPs – 37.</p> <p>(2) Expected impact other than the project objective: Since some of the training subjects were innovative technologies, trained farmers were expected to disseminate their knowledge of these to adjacent farmers in their villages. Training on Banana Dense Planting was a good example of this.</p>
	Sustainability	<p>(1) Institutional aspect: DATC functions with limited facilities to conduct the training programme. Since only one lecture hall was in good working condition for the training programme and was also used as a conference hall for several DOA programmes and meetings, DOA schedule interfered with the training programmes of the pilot project. Some facilities of DATC do not satisfy the basic needs of participants. Therefore, Modernization of DATC building is highly recommended.</p> <p>(2) Financial aspect: n/a</p> <p>(3) Establishment and prevalence of technical aspect: The transfer of technology to some innovative farmers of the Society was achieved. The trained farmers set up some demonstration plots at their farms and this induced adjacent farmers to employ these new technologies.</p>
Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Earlier transport arrangements were done by using DOA’s vehicle under their budget. Later DOA faced shortage of funds to cover fuel expenses and DOA vehicle was hired by superior authorities at that time. Therefore, DOA could not transport farmers to DATC and this was a major reason for intermittent training programmes. At this point, PDP-Jaffna detected this issue and made transport arrangements.</li> <li>- Annual exhibition &amp; its pre arrangements of DOA will help farming population to understand about the new innovative technologies. This will further give chance trained farming population to recapitulate the various topics.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Some training programmes had been postponed by DOA in previous days; therefore the project was delayed and could not be completed within the scheduled timeframe.</li> <li>- Lack of extension / agricultural officials in DOA is a major issue to carryout the monitoring whether the trained farmers follow as instructed.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Vulnerable members of the farming population should be assisted to secure sustainable livelihoods, and thereby positive impacts are expected. DOA should take measures to assist vulnerable communities via various government programmes and guide donor agencies to do so.</li> <li>- DOA should recruit more agricultural officials, especially AIs, for the future agricultural development of Jaffna. Since the number of agricultural officials is insufficient, it is difficult to achieve optimum output in time.</li> <li>- On farm training / Farmer Field Schools could be more effective to transfer technology. DOA should arrange this kind of programmes routinely and location specific crops can be focused more to introduce innovative technologies on it.</li> <li>- Cultivation models / demonstration plots should be maintained throughout the year by DOA at DATC. This will provide enough information to farmers about on farming activities.</li> </ul>	



Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- The DATC functions with limited facilities to conduct the training programme. Some facilities of DATC do not satisfy the basic needs of participants. Therefore, Modernization of DATC building is highly recommended.</li> <li>- DOA was operating training programmes with a limited number of instructors. The instructors were eager to learn more.</li> <li>- Farmers and agricultural officials of DOA preferred to have some exposure visits to other districts of Sri Lanka. This is expected to give an opportunity to learn about farming practices adopted in rest of the country.</li> <li>- Agricultural officials of DOA should be trained on various aspects of agriculture. Sending them to neighbouring countries to grasp more knowledge on the relevant fields is one of the options.</li> </ul>
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### 8.3.3 Pilot Project AC-3

Pilot Project Title (No.)	Strengthening of Mango Growers Society (AC-3)	
Achievement	Technical aspect	<p>(1) Number of mango trees pruned According to the data of DOA, the Mango Society and the responsible field official (Chavakacheiri AI), 480 mango trees were pruned and trained during and after awareness programmes in Chavakacheri DS.</p> <p>(2) Number of mango growers practicing technology (pheromone trap and others) Most of the trained farmers started to practice the technology with the tools provided by the pilot project. All the pheromone traps (250 in total) provided by the pilot projects were practically used at the farmers fields.</p>
	Institutional aspect	<p>(1) Institutional development of Mango Growers Society in terms of progress of meetings, other activities, and recording condition After establishment of fruits collection and sales outlet, the Society was conducting a weekly meeting every Sunday. There were 12 committee members participating and discussing the business activities of the outlet and income generation activities of the pruning team.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - Improve the productivity of mango cultivation while strengthening the capability of the mango growers' society: Over 500 farmers were participated the awareness program and got aware of pruning mango trees to improve mungo productivity and practiced leaned technology. 48 youth were trained on mango cultivation and the result of post test was increased 19% over the pre test. The administrative members of the society were received capacity building program and practicing learned knowledge. This is expected to enhance the productivity of mango and benefit mango growers.</p> <p>(2) Effects of external factors: Fruits collection and sales center building has been opened by DOA in Chavakacheri DS, where mango and jack fruits are the main commodity to be dealt. This building has been handed over to and operated by Chavakacheri fruit producers and sales cooperative society.</p>
	Impact	<p>(1) Achievement of the Project objective – Assist local people of the district, including IDPs, and strengthen CBOs: Technical training on mango pruning: Female – 19; Male – 29; IDPs – 0. Mango awareness programme: Female – 255; Male – 198; IDPs – 19. 48 youths from Chavakacheri AI range were thoroughly trained on pruning technologies. The youth are expected to join the society's pruning team which is providing pruning service to the society members.</p>

		<p>(2) Expected impact other than the project objective: The pilot project is expected to enhance the productivity of mango and benefit mango growers economically thus uplift the regional economy.</p>
Sustainability		<p>(1) Institutional aspect: The Mango Society established an outlet to sell fruits and juices. In addition, Society members were well trained in agronomic aspects of mango cultivation. These enhanced the Society's institutional sustainability.</p> <p>(2) Financial aspect: The major income source of the Society, the sale outlet, has been established. According to the information from the outlet, the cash flow was LKR 10,000 per day. However, this outlet is struggling to meet recurrent expenses, as it was opened recently. The society's pruning team did not earn much money from their service, as it was being done at minimal rate. Therefore, the Mango Society is financially weak and not yet sustainable.</p> <p>(3) Establishment and prevalence of technical aspect: The Society was fully equipped with technology and was able to undertake pruning activities independently. However, female members of the society who were in the sales outlet need to be trained on proper processing technologies.</p>
Recommendations		<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Opening of the fruits sale outlet establishes a focal point for quality fruit seekers in Jaffna. This is positively contributing to the success of the pilot project. DOA stated that ground is prepared for boosting mango production in Jaffna by this kind of project.</li> <li>- Youths of the Mango Society have been trained on pruning and training of mango trees at DATC field. This was the one day training programme and they were thoroughly trained on agronomic aspects of mango cultivation from planting to harvesting. Since the youth involvement is getting reduced in agriculture in Jaffna, this initiative will positively contribute to change their attitude towards mango cultivation. In addition, youths can easily climb the tree for pruning compared with old farmers. Therefore, DOA focuses youth and their involvement as pruning crew of the Mango Society.</li> <li>- DOA implements projects targeting mango growers in the district via various donor agencies' projects and by line ministry funding. This complemented each other and led bigger impact than implementing the pilot project alone.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The project was delayed due to various reasons, such as: only one AI was responsible for the awareness programme and he was hospitalized by an accident; difficulty in obtaining pruning tools on time; etc.</li> <li>- Monkey problem on mango trees; Monkeys are now considered as the key mammalian pest of mango and it is difficult to control. All the farmers interviewed in Chavakacheri reported that with monkey problem it is hard to obtain good yield from mango.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Measures should be taken to disseminate the technology throughout Jaffna Peninsula. DOA focused more on the Mango Society in Chavakacheri. However, other mango societies also need to be strengthened via various government and NGOs projects.</li> <li>- The Society should set an attractive price for pruning mango trees so that earning opportunities should be explored for pruners. DCD and DOA should jointly work and decide the best price for pruning and it should be reasonable one.</li> <li>- The Mango Society members who at the sales outlet should be trained on processing technologies of fruits. DOA should take responsibility to train them.</li> <li>- Mango yard / Mango grove should be established or big mango cultivators should be encouraged. There is no any big standard orchard model in Jaffna especially for mango. DOA should make a model mango yard with all necessary facilities or encourage a big mango cultivator to make it as a good model for demonstration purpose.</li> <li>- Private nursery men should be encouraged / trained to produce quality mango seedlings in sufficient amount. Thereby, production of Jaffna specialities can be increased. DOA should jointly work with them in order to supply adequate quantity at reasonable prices.</li> </ul>

Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- The Mango Growers Society, Chavakachcheri Fruit Producers, and Sales Cooperative Society, Ltd., was established in 2009. It is still young and institutionally unstable. Its leadership is not strong enough to lead the Society. They need further support from DOA.</li> <li>- DOA was trying hard to strengthen the Society through establishing the sales outlet and providing technical support. However, DOA has limited capacity to support the Society. Human resource development of DOA should be done at the same time.</li> </ul>
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### 8.3.4 Pilot Project AC-4

Pilot Project Title (No.)	Promotion of Mushroom Cultivation (AC-4)	
Achievement	Technical aspect	<p>(1) Amount of spawn produced by the mushroom spawn production facility</p> <p>The technical staff of mushroom laboratory succeeded to produce mother culture and sub-cultured in mass scale to inoculate it to sterilized paddy grains. As of the end of September, 78 bags (7.8 kg) of mushroom spawn have been produced since operation started in July. It is expected to produce 50 kg of spawn per month within a year.</p> <p>(2) Technical improvement of technicians on operation and maintenance of the mushroom spawn production facility:</p> <p>The technical persons gained capacity to operate and perform maintenance of the laboratory facility. They underwent technical training on handling and maintenance of equipment by the dealer and spawn production technology by a mushroom researcher, ARS, Sita Eliya.</p>
	Institutional aspect	<p>(1) Number of members of the Mushroom Cultivation Society</p> <p><b>At the beginning:</b> 113 As of 12 September: 113 <b>Expected at the end of the Project:</b> 150</p> <p>Some newly trained cultivators were expected to join the Society.</p> <p>(2) Institutional development of the Mushroom Cultivation Society in terms of progress of meetings, other activities, and recording condition</p> <p>The Mushroom Society had a monthly meeting at DATC and it discussed the issues related to obtaining saw dust and marketing of mushroom harvest. Records were being maintained by the secretary of the Society. The Society had to conduct several meetings and maintained records properly to register it under DCD.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - Promote mushroom cultivation among local farmers:</p> <p>Obtaining spawns for mushroom cultivation was the major bottleneck to Jaffna growers. This has been solved and spawns are available locally in required amount.</p> <p>Farmers were provided various trainings including technical training on cultivation, exposure visit and capacity building training for the growers' society. Through these activities, the society and farmers' technical skill are enhanced and farmers are stimulated into mushroom cultivation.</p> <p>(2) Effects of external factors:</p> <p>No serious issues.</p>
	Impact	<p>(1) Achievement of the Project objective – Assist local people of the district, including IDPs, and strengthen CBOs:</p> <p>Participants in mushroom cultivation training totalled 100. Among them, 13 male participants and 87 female participants, including three IDPs. By this project, members of a WRDS, including IDPs, received training on mushroom cultivation as an income-generating activity.</p> <p>(2) Expected impact other than the Project objective:</p> <ul style="list-style-type: none"> <li>- More mushroom will be available to the local people.</li> <li>- More people will become interested in mushroom cultivation.</li> </ul>

	Sustainability	<ul style="list-style-type: none"> <li>- The spawn production center is expected to supply spawns throughout Northern Province.</li> </ul> <p>(1) Institutional aspect:</p> <ul style="list-style-type: none"> <li>- Mushroom spawn production and demonstration facility will be operated by DOA and SEEDCO. Thus, it is institutionally sustainable.</li> <li>- The Mushroom Society is at the ground level. First the Society should be registered as an authorized organization; thereafter it should work towards sustainability.</li> </ul> <p>(2) Financial aspect:</p> <ul style="list-style-type: none"> <li>- According to the operation plan of the mushroom spawn production and demonstration facility, this facility is expected to produce 500 kg of spawn and 450 kg of mushroom per year and net profit is expected to be LKR 80,000.</li> <li>- The Society is financially weak. Therefore, the support from the profit of the facility should be considered.</li> </ul> <p>(3) Establishment and prevalence of technical aspect:</p> <ul style="list-style-type: none"> <li>- The technical staff of mushroom laboratory is able to produce spawns by themselves and DOA's technical staff will support continuously. This will make the mushroom spawn production and demonstration facility technically sustainable.</li> <li>- The Society itself had technical views on mushroom cultivation, and some members of the Society participated in spawn production technology training as well. The Society is technically equipped. However, some mushroom processing / value addition training should be given.</li> </ul>
Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The DOA took an initial step to train relevant staff and technical persons on mushroom spawn production technology at Agriculture Research Station, Sita Eliya. After that, DOA officials &amp; technical staff of mushroom lab have been able to operate the facility.</li> <li>- The dealer supplied equipment, chemicals, and laboratory items on time. The dealer also trained the relevant staff on how to handle the equipment. Since the dealer has its representative in Jaffna, it is easy to obtain consultant services on time when equipment shows any malfunction.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Construction was delayed due to several modifications and specifications suggested by DOA time to time. In addition, the contractor also was suffering to get a specific paint of which has anti fungal properties on time.</li> <li>- Obtaining sawdust is a difficult task for mushroom growers in Jaffna. Mango sawdust is recommended by DOA to use it as bedding material for mushroom cultivation. However, its availability is insufficient to meet the local demand.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Mushroom society should secure the sawdust suitable for mushroom cultivation at reasonable cost. DOA should support mushroom society to get sawdust with bulk from south.</li> <li>- Some research activities should be initiated to grow mushrooms on paddy straw as a substitute raw material for sawdust. DOA, Agriculture Research Station and Faculty of Agriculture should jointly explore the possibilities to grow mushrooms on paddy straw as it is available in huge amount in Jaffna.</li> <li>- Assistance (inputs) should be given to mushroom beginners and cultivators to start mushroom cultivation. Since it is a small cottage industry, vulnerable people can be incorporated into the project. DOA should make sure to include vulnerable communities for their mushroom project.</li> <li>- Consumers in Jaffna should be aware of eating mushroom. Few families consume mushroom at the moment. DOA and concerned NGOs should work together to make public in Jaffna aware of eating mushroom.</li> <li>- The Mushroom Society should be registered to get more benefits from relevant sectors. The Mushroom Society had applied to register DCD under the support of PDP Jaffna, but the registration had not completed yet. DOA should follow up and make the registration sure.</li> </ul>	

Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Proper marketing channel should be developed from farm gate to super market. Mushroom cultivators usually market their produce at their home, sales outlet of DATC or nearby shops. Hence, the volume of the sale is limited.</li> <li>- Available resources should be thoroughly checked when introducing new crops. Suitable sawdust for mushroom cultivation is limited in Jaffna district. This should have been checked when the project started.</li> </ul>
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### 8.3.5 Pilot Project AC-5

Pilot Project Title (No.)	Rehabilitation of Atchchuvveli Coconut Nursery (AC-5)	
Achievement	Technical aspect	<p>(1) Number of coconut seedlings produced at the Nursery  <b>Last year</b> (2010): 60,600 viable seedlings produced.  <b>This year:</b> (as of 12 September): 69,000 seedlings  <b>Expected for this year:</b> 127,000 seedlings (70,000 additional seedlings were expected to be produced)            Expected for next year: 150,000 seedlings</p> <p>(2) Technical improvement of technicians in operation and maintenance of irrigation facility and agricultural machinery            The CCB staff did not previously know about the technical aspects of Four Wheel Tractor and its accessories. After the training at FMTC, four CCB staff members developed good skills in tractor operation and maintenance, handling of tractor accessories, and operation of sprinkler irrigation system.            According to the feedback from those CCB staff, this training session was fruitful and enabled them to handle important farming implements. Now, they are operating farming implements and tractors independently and are maintaining them in good working condition.</p>
	Institutional aspect	<p>(1) Number of farmer training courses conducted at the Nursery            Two(2) training courses on coconut cultivation were conducted at the newly constructed training hall by the end of the project.            Total number of participants were 337.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - Recover fully the nursery production so that a large number of local famers can get quality seedlings from the nursery at a reasonable price:            Machineries and irrigation system provided by the project are utilized effectively and the number of quality seedlings produced at the nursery was increased. Farmers including returnees are receiving more number of quality seedlings from the nursery.</p> <p>(2) Effects of external factors:            No serious issues.</p>
	Impact	<p>(1) Achievement of the Project objective – Assist local people of the district, including IDPs, and strengthen CBOs:            This Project was partly targeted to returnees and IDPs with the issuance of free coconut seedlings. CCB distributes coconut seedlings produced at the nursery free of charge to returnees and IDPs. This was expected to enhance their livelihood after some years.</p> <p>(2) Expected impact other than the Project objective:            - Since the demand for coconut was high throughout Sri Lanka due to production deficiency in the south, Jaffna was expected to be sustainable in coconut production after this project and to supply other districts.            - The project is expected to provide an extra income to farmers and contribute to uplift the local economy.</p>
	Sustainability	<p>(1) Institutional aspect:            The CCB nursery is institutionally sustainable to produce coconut seedlings with optimum usage of resources.</p> <p>(2) Financial aspect:            Even though the coconut seedlings are distributed free of charge and at</p>

		<p>a subsidized price, CCB has sufficient financial strength to meet recurrent expenses.</p> <p>(3) Establishment and prevalence of technical aspect: CCB is technically viable to produce coconut seedlings and maintain machinery in good running condition.</p>
Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The Regional Manager of CCB was flexible and keen to complete project activities.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Three-phase power supply to the nursery was not available until the mid of September 2011. Power supply should be confirmed before starting the project since it will totally change the operation system.</li> <li>- Delivery of some parts of irrigation system was delayed due to lack of stock at the dealer. Availability of all the parts should be confirmed before making an order.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- More coconut growers should be trained on agronomic aspects of coconut cultivation. The coconut society and CCB should take responsibility to train more coconut growers in the district.</li> <li>- The number of Extension Officers of CCB should be increased further. The Head Office of CCB should recruit more officers to carryout extension activities in Jaffna.</li> <li>- Provision of a vehicle to CCB will facilitate the training programmes in future. Like DOA, the CCB will carry farmers from different places and train them at CCB Atchchuvely nursery.</li> <li>- Coconut model gardens should be established in Jaffna. CCB should take responsibility to initiate this kind of model gardens in Jaffna. This will be used for demonstration purpose.</li> <li>- An additional coconut nursery should be established to fulfil the demand. Coconut potential areas of Chavakacheri have been released recently, creating a huge demand for coconut seedlings. An additional nursery with an extent of 10 ac should be established to meet the demand.</li> </ul>	
Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- There is very high demand for coconut due to insufficient local supply and production deficiency in the south. The following should be considered as subjects of future projects: 1) promotion of coconut cultivation, including king coconut cultivation, and 2) setting up an additional coconut nursery to meet the coconut demand.</li> </ul>	

### Infrastructure Rehabilitation Component (Coconut Nursery)

Component Title	Rehabilitation of Atchuhuveli Coconut Nursery	
Achievement	Technical Aspect	<p>(1) Coconut Nursery's facilities are renovated to local quality standards. The facilities were constructed with appropriate quality standard in Sri Lanka.</p> <p>(2) Constructed boundary wall can protect the coconut nursery from wild animals. The constructed boundary wall can effectively protect the coconut nursery from wild animals such as wild boar. The coconut nursery no longer faces damage due to wild animals.</p>
	Institutional aspect	<p>(1) Capacity of O&amp;M of Coconut Nursery is improved Capacity of O&amp;M of the coconut nursery has been improved through the O&amp;M and office management training under the Project. Also, its coordination capacity was improved in the process of construction work.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: Concerning constructed facilities, expected functions of the Nursery as a regional center of training and production of coconut seedlings were recovered with a modern facility. CCB is satisfied with the quality and management of the construction work.</p> <p>(2) Effects of external factors: An abandoned agro well was rehabilitated to be able to secure sufficient water for irrigation, although a discovered limestone layer hampered construction of the well to its designed diameter.</p>

	Impact	(1) Achievement of the Project objective: n/a (2) Expected impact other than the Project objective: n/a
	Sustainability	(1) Institutional aspect: CCB needs to continually request power supply to the Nursery to CEB. (2) Financial aspect: CCB needs to secure budget for installing a generator in case power supply to the Nursery is suspended. (3) Establishment and prevalence of technical aspect n/a (4) Operation and Maintenance: CCB is required to practice acquired knowledge and skills of O&M through the pilot project and O&M action plan.
Lessons Learned	Although infrastructure development plan, including power supply to newly released area, tends to be changeable in the post-conflict situation, the power supply plan should be confirmed carefully with not only CCB but also concerned government body (CEB) at the design stage.	

### 8.3.6 Pilot Project AC-6

Pilot Project Title (No.)	Improvement of Milk Processing Facility in Point Pedro (AC-6)	
Achievement	Technical aspect	(1) Amount of milk processed by the milk processing facility As of 12 September: Nil <b>Expected at the end of the year:</b> 500 litres / day; ultimate target is 1,000 litres per day. (2) Technical improvement of the operators of the milk processing facility The equipment dealer had instructed to the operators of LIBCO on how to use and maintain milk processing equipment. The operators will acquire practical technology through on the job training provided by the equipment dealer and DAPH officials.
	Institutional aspect	(1) Institutional development of LIBCO in terms of progress of meetings, other activities, and recording condition LIBCO had enough capacity to continue its activities and had meetings routinely; usually they held one to three times of meetings per month according to the activities. (2) Number of employees for milk processing Three women were involved in the milk processing facility. The number of employees would be increased when the amount of milk processed be increased. (3) Number of member farmers supplying milk to LIBCO 100 farmers were supplying milk to LIBCO out of 3,150 members. It was expected to increase after starting the operation of the facility.
Evaluation	Effectiveness	(1) Achievement of the pilot project objective - Facilitate further the success of the LIBCO by providing a milk processing facility: The milk processing facility was ready to operate practically. The amount of milk processing of LIBCO was expected to be increased, and more farmers were expected to start to supply milk to LIBCO. Institutional capacity of LIBCO had been improved through various trainings. This was expected to satisfy the objective of the Project. (2) Effects of external factors: No serious issues.
	Impact	(1) Achievement of the Project objective -- Assist local people of the district, including IDPs, and strengthen CBOs: More farmers were expected to start to supply milk to LIBCO, including IDPs and returnees. Female members of the society were expected to be recruited as operators for the collection centers and the milk processing facility. This Project would promote farmers to start cattle rearing by creating greater demands for milk in the nearby area. In addition, this processing facility would be a good model for other

		LIBCOs in Jaffna / Northern Province. (2) Expected impact other than the Project objective: - Milk suppliers are expected to get an opportunity to supply milk continuously and thereby have steady income. - Adjacent farmers would be encouraged to start milk production.
	Sustainability	(1) Institutional aspect: LIBCO is institutionally sustainable to conduct the business activities. However, LIBCO is still looking for a permanent place for its administrative office. (2) Financial aspect: LIBCO was financially stable, as it saved some money from the business activity of the sales outlet. This Project supported another major income sources to LIBCO. (3) Establishment and prevalence of technical aspect: The LIBCO operators were trained on operation of new machinery such as a homogenizer and a packing machine. LIBCO is fully technically equipped.
Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The Deputy Provincial Director of DAPH was very keen to establish the pilot project and cooperated with PDP Jaffna.</li> <li>- DAPH focuses more on dairy development project and it guides NGOs to develop dairy villages in Jaffna. This will positively impact on the pilot project.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The delivery of mini truck and homogenizer was delayed due to unexpected situations on the suppliers' side. This was postponing the processing.</li> <li>- Southern dairy companies recently started to collect milk in Jaffna. LIBCO have to compete with them.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- LIBCO should take measures to keep their milk suppliers with them, since southern dairy companies are seeking raw milk in Jaffna. LIBCO should offer competitive purchasing price of milk to suppliers, otherwise LIBCO will lose its suppliers.</li> <li>- Processed milk products should withstand competition with southern products. Quality improvement is essential to compete.</li> <li>- Provision of training to milk suppliers on clean milk production is essential to produce good quality milk. DAPH should be responsible to take this action. This will enhance the quality and quantity of milk supply / production.</li> <li>- Milk collection points of LIBCO should be further strengthened. Now four milk collecting centers are under the LIBCO. LIBCO should further strengthen these collection centers for the effective functioning.</li> <li>- DAPH should organize other LIBCOs to visit LIBCO, Point Pedro as a model LIBCO succeeded in milk processing business.</li> </ul>	
Lessons Learned	Lessons learned for the project formulation for future projects or future development of Jaffna: - Leadership is an essential part of the vitalization of LIBCO. LIBCO, Point Pedro attained success because of the effective leadership of a veterinary officer stationed at Point Pedro.	

## 8.4 Monitoring, Evaluation, and Lessons Learned in the Fisheries Sector

### 8.4.1 Pilot Project FC-1

Pilot Project Title (No.)	Integration of Community-based Fishery Management System on the District Level (FC-1)	
Achievement	Technical aspect	(1) Preparation of inventory on customary practices, fishery regulation, and self-control. - Inventory collection has been completed for 53 FCSes covering all the FCSes in target DSs; i.e. Point Pedro, Velanai, Jaffna, and Chavakachcheri, together with several adjacent FCSes.
	Institutional aspect	(1) Fishermen's recognition of the importance of fishery management. <b>At the beginning:</b> They focused mainly on income from their fishing activity. They didn't worry about the fishery resources seriously nor

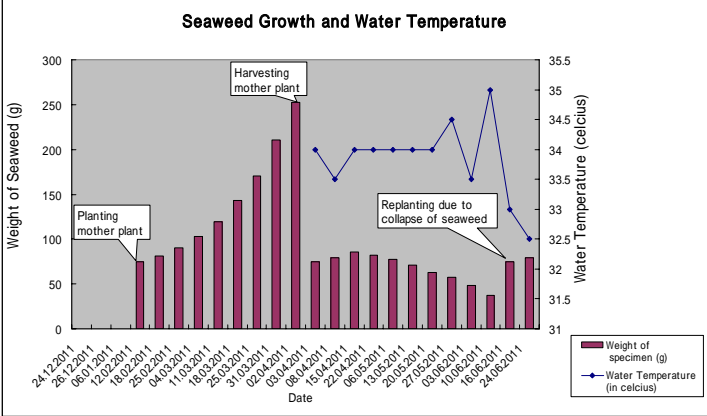


		<p>did they consider the relationship between their customary practices or self-control and their fishery resources.</p> <p><b>At the end:</b> Many fishermen and FCSes' executives had opportunities to consider their customary practices and self-control in relation to their fishery resources through discussion for inventory record. They also had the same opportunities during discussions in a series of workshops; thereby they have recognized the importance of fisheries management.</p> <p>(2) Holding workshops on fisheries management by FCS Unions and FCS Unions' Federation.</p> <ul style="list-style-type: none"> <li>- Workshops of FCS Unions were held in Jaffna DS on 28 June, in Chavakachcheri DS on 29 June, and in Point Pedro DS on 5 July 2011. Participants discussed the introduction of traditional stake net fisheries management in Jaffna DS and Chavakachcheri DS; and gill net fisheries management in Point Pedro DS.</li> <li>- A workshop of the FCS Unions' Federation was held on 18 July 2011 and ratified implementation of the traditional stake net fisheries management system on the district level.</li> </ul>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective -- Community-based fishery management systems are well coordinated, integrated, and formalized on the district level:</p> <p>(a) Coordination: Registration system for traditional stake net fisheries recommended by DFAR in Jaffna was coordinated in many specific points during a series of the workshops.</p> <p>(b) Integration: Several fishing rules varied among areas in Jaffna District such as intervals between two stake nets have been integrated and formulated on the district level; e.g., 150 yards from Pannai causeway to Gurunagar jetty; and 200 yards in other places in the lagoon.</p> <p>(c) Formalization: The traditional stake net fisheries management system has been formulated and formalized through ratification by members in the workshop of the FCS Unions' Federation held.</p> <p>(2) Effects of external factors: DFAR recommended introducing a registration system for traditional stake net fisheries when PDP Jaffna implemented inventory collection and discussed this matter with stakeholders, including DFAR. Therefore, this fisheries management system has been formulated and formalized with a joint work of FCSes and DFAR.</p>
	Impact	<p>(1) Achievement of the Project objective -- Assist local people of the district, including IDPs, and strengthen CBOs: Structure and total number of stake nets per family are formulated on the district level, which will help avoid rich fishermen utilizing more fishing gear than the recommended level, and new fishermen/returnees can commence fishing activities without deteriorating fishery resources.</p> <p>(2) Expected impact other than the Project objective: Intervals between two stake nets have been formulated on the district level; thus, conflict between fishermen in Chavakachcheri and Gurunagar and the adjacent areas will be reduced when the latter fishermen catch fish with stake nets in waters of Chavakachcheri.</p>
	Sustainability	<p>(1) Institutional aspect: FCSes have organized 96% of active fishers in Jaffna District and they have functioned as a core CBOs in coastal communities for many years. Now, however, MFARD has begun to organize Rural Fisheries Organizations in recent years with almost the same executives and members of the FCSes in the district. Keen attention is necessary in relation to how the latter organization will function for uplift of people's lives.</p> <p>(2) Financial aspect:</p>

		<p>PDP Jaffna supported for capacity building of the FCS Unions' Federation in terms of technical assistance and providing equipment, thereby it has attained capacity improvement to a certain extent. However, the FCS Unions' Federation has limited human resources and limited financial background, and thus the sustainability of the pilot project effect is limited if no follow-up activity will be conducted. Further assistance is needed for increased sustainability.</p> <p>(3) Establishment and prevalence of technical aspect:  FCSes have formulated and formalized a traditional stake net fisheries management system through ratification by members during a workshop of the FCS Unions' Federation; thus, the technical establishment has been achieved, provided the Federation as well as concerned Unions will catch up with the formulated management system.</p>
Recommendations	<p>(1) Contributing factors to the success of the pilot project:  Good support was provided by DFAR in recommending the introduction of registration system for the traditional stake net fisheries based on an initiative of FCS as community-based fishery management. It was easier to get a consensus among fisher's stakeholders for the integration of various fishing rules on the district level through a series of workshops on the Union and Federation levels. Thus, the Team recommends preceding activities in close cooperation with DFAR.</p> <p>(2) Impeding factors to the success of the pilot project:  The Team often experienced difficulties in holding workshops as scheduled due to sudden cancellations caused by incidents of Indian trawler intrusion which was a hot issue for fishermen in the district; and various political occasions before the local election. Such external factors must be taken into consideration.</p> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:  Even though the traditional stake net fisheries management system has been formalized, it will be only on paper unless members of FCSes implement the management system with their keen attention. Constant follow-up and feed-back are essential for FCS Unions and the Federation, along with continuous supervision by DFAR.</p>	
Lessons Learned	<p>Lessons learned for the project formulation for future projects or future development of Jaffna: Co-management is a system to manage fishery resources by integrating community-based fishery management and top-down type scientific resources management. In this pilot project, good cooperation was realized between FCS and DFAR, thus this is an introductory experience for fisheries co-management system which is important to realize the sustainable system of fisheries development in Jaffna District.</p>	

#### 8.4.2 Pilot Project FC-2

Pilot Project Title (No.)	Introducing Seaweed Farming as an Alternative Livelihood (FC-2)	
Achievement	Technical aspect	<p>(1) Verification that seaweed grows in the water of Jaffna District.</p> <ul style="list-style-type: none"> <li>- It is verified that seaweed grew from February to the middle of April, but it didn't grow well during the high water temperature period in May at the pilot project site in Punguduthivu East (see the attached figure below).</li> <li>- It is necessary to confirm the growth suitability of the pilot project site during other months of a year as well as to find some other sites in the district that are suitable for seaweed growth in May. Sewalanka Foundation has committed to continuing these tasks after the end of PDP Jaffna.</li> </ul>

		 <p>(2) Target members' acquisition of technique on seaweed farming and processing.  <b>At the beginning:</b> They had no knowledge on seaweed farming and processing, because it was quite a new technique in Jaffna District.  <b>At the end:</b> Six teams composed of 31 beneficiaries have obtained adequate knowledge on seaweed farming in terms of how to set up farms with material, how to look after mother plants, commercial seaweed farming and how to process dry seaweed under the supervision and assistance of Sewalanka Foundation.</p>
	Institutional aspect	<p>(1) Involvement of socially vulnerable people in the activity:  Sewalanka Foundation has selected beneficiaries from socially vulnerable people in the community, all of who are under the poverty line because they receive the Samurdhy<sup>3</sup> assistance; including seven IDPs and a female-headed family.</p> <p>(2) Understanding by target members and FCS executives of cost and benefit structure of seaweed farming:  <b>At the beginning:</b> The beneficiaries didn't have any idea about the cost and benefit structure of seaweed farming.  <b>At the end:</b> The staff of Sewalanka Foundation often instructs the beneficiaries on the cost and benefit structure including weight ratio of dried seaweed and purchasing market price of dry seaweed, and therefore they have gained necessary knowledge on it.</p> <p>(3) Commitment of target FCS to the continuity of the activity:  The target FCS commits to continuing the activity, provided that Sewalanka Foundation keeps on assisting them in terms of seaweed farming development in their community.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective - The pilot project aims at introducing the techniques of commercial seaweed (<i>Eucheuma. sp</i>) farming, thus it will create an alternative livelihood activity in coastal communities in Jaffna District.</p> <p>a) Income generation:  <b>At the beginning:</b> Most women in the community had no income.  <b>At the end:</b> The beneficiaries have received only some amount for community monitoring because they haven't experienced any commercial harvest of seaweed as of beginning of October 2011.</p> <p>b) Degree of empowerment as society:  - The society has improved their institutional and management capacity to a certain extent through a capacity building and leadership training programme conducted by Sewalanka</p>

<sup>3</sup> Samurdhy is the poverty reduction programme implemented by GOSL. If any family's income falls below LKR 2,500/month/family, it is eligible for the Samurdhy programme. GOSL implements several programmes under the Samurdhy programme, such as savings, loans, housing scheme, food stamps for dry ration, etc. Value of the food stamps depends on the number of family members.

		<p>Foundation, although the effect is not yet clearly visible. Continuous assistance to the society in this field is highly recommended.</p> <ul style="list-style-type: none"> <li>- Sewalanka Foundation already conducted training on seaweed farming technique and the society has adequate capacity for seaweed production because they have mastered how to treat the seaweed except for technically sophisticated matters.</li> </ul> <p>(2) Effects of external factors: High water temperature in May 2011 and the following high-salinity period in June hindered the growth of seaweed.</p>
	Impact	<p>(1) Achievement of the Project objective: -- Assist local people of the district, including IDPs, and strengthen CBOs:</p> <ul style="list-style-type: none"> <li>- The 31 beneficiaries, including seven IDPs and one female-headed family, have learned production technique.</li> <li>- Female beneficiaries used to hesitate getting into the sea for work due to traditional and cultural barriers at the first moment of the pilot project; thereafter they became willing to work in the sea. This is just one of cases of women expanding their economic and cultural horizons.</li> </ul> <p>(2) Expected impact other than the Project objective:</p> <ul style="list-style-type: none"> <li>- DFAR has been interested in seaweed farming, whereas it was passive when PDP Jaffna was planning seaweed farming owing to a negative report in potentiality of aquaculture development in brackish water of Jaffna. Now, DFAR in Jaffna is willing to cooperate with the district aquaculture development.</li> </ul>
	Sustainability	<p>(1) Institutional aspect: Sewalanka Foundation, the implementing partner of the pilot project, has committed to continue seaweed farming with a community in Punguduthivu East after the end of PDP Jaffna. This is because the Foundation has focused their activities on the capacity development of Pungudutivu Social Economic Cooperative Society composed of about 50 CBOs in Pungudutivu Island since several years ago. It will continue seaweed farming as one of its capacity development efforts for the Society. Another reason is that the Foundation feels high potentiality of new business in seaweed farming which will bring a new income source for coastal communities in the near future.</p> <p>(2) Financial aspect: Sewalanka Foundation plans to continue the activity with its own budget. It is also going to look for other donor agencies for further development.</p> <p>(3) Establishment and prevalence of technical aspect: Several suitable sites must be identified for good growth throughout the year possibly by shifting sites in accordance with seasonal change to maintain mother plant safely. This is being done by Sewalanka Foundation at present, and it is expected to find additional sites soon.</p>
Recommendations		<p>(1) Contributing factors to the success of the pilot project: Market exploitation is one of the critical factors for success of the seaweed farming pilot project. Because <i>carragenan</i>, an ingredient abstracted from the seaweed, is a similar material to agar-agar, and has broad potentiality of use including dairy products such as ice cream, a product made with boiled fish paste, starch for textiles, medicine and cosmetics, etc. It is indispensable to establish a purchasing system of seaweed produced by beneficiaries to keep their motivation for production. Jaffna District does not have any demand for seaweed at present; however, confectionaries such as Ceylon Biscuit Limited (CBL) use powdered seaweed as a binding agent. It is necessary to link with domestic confectionaries such as CBL and beneficiaries in addition to finding potentialities for export to foreign markets.</p>

	<p>(2) Impeding factors to the success of the pilot project: Keen monitoring water temperature and salinity is indispensable especially during the hot season and the rainy season. Once such critical conditions are observed, the plants should be shifted to other suitable sites.</p> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact: When an aquaculture pilot project is planned for enhancement of income generation in communities, it is advisable to assist communities with several channels for income generation or to select communities which receive several assistances from donor agencies or NGOs. This is because aquaculture trials take time to gain income from production. This pilot project falls under the latter case, since the target community of Pungudutivu East has received assistance from Sewalanka Foundation since several years ago.</p>
Lessons Learned	<p>Lessons learned for the project formulation for future project or future development of Jaffna: - Now is still the first stage of continuous trials for aquaculture development in Jaffna District. Trials and errors are a must for successful development of aquaculture.</p>

### 8.4.3 Pilot Project FC-3

Pilot Project Title (No.)	Sea Cucumber Farming as an Alternative Livelihood Enhancement (FC-3)																																																																																																																																																	
Achievement	Technical aspect	<p>(1) Verification that sea cucumber grows in the water surrounded by fish pen in Jaffna District: Length and weight measurement revealed growth rate after four months; i.e. 165% (weight) and 127% (length) in Gurunagar; 259% (weight) and 134% (length) in Navanthurai; and 243% (weight) and 144% (length) in Mandaithivu compared with the baseline data. Please refer to the table below. It is verified that sea cucumber grows in the water surrounded by fish pen in the district.</p> <table border="1"> <thead> <tr> <th rowspan="2">Indicators</th> <th colspan="4">Mandaithivu</th> <th colspan="4">Gurunagar</th> <th colspan="4">Navanthurai</th> </tr> <tr> <th>Date</th> <th>Specimen (pcs.)</th> <th>Weight (g)</th> <th>Length (cm)</th> <th>Date</th> <th>Specimen (pcs.)</th> <th>Weight (g)</th> <th>Length (cm)</th> <th>Date</th> <th>Specimen (pcs.)</th> <th>Weight (g)</th> <th>Length (cm)</th> </tr> </thead> <tbody> <tr> <td>Base Line</td> <td>28,28-Apr</td> <td>926</td> <td>92.5</td> <td>11.3</td> <td>18,25-May</td> <td>1079</td> <td>111.4</td> <td>12.0</td> <td>29,31-May</td> <td>853</td> <td>91.2</td> <td>11.6</td> </tr> <tr> <td>One month after stock</td> <td>4-Jun</td> <td>120</td> <td>87.6</td> <td>11.4</td> <td>23-Jun</td> <td>129</td> <td>114.0</td> <td>12.5</td> <td>29-Jun</td> <td>139</td> <td>152.8</td> <td>14.3</td> </tr> <tr> <td></td> <td></td> <td></td> <td>95%</td> <td>101%</td> <td></td> <td></td> <td>102%</td> <td>104%</td> <td></td> <td></td> <td>168%</td> <td>123%</td> </tr> <tr> <td>Two months after stock</td> <td>4-Jul</td> <td>131</td> <td>131.6</td> <td>13.9</td> <td>20-Jul</td> <td>127</td> <td>145.4</td> <td>15.5</td> <td>29-Jul</td> <td>126</td> <td>167.1</td> <td>13.7</td> </tr> <tr> <td></td> <td></td> <td></td> <td>142%</td> <td>123%</td> <td></td> <td></td> <td>131%</td> <td>129%</td> <td></td> <td></td> <td>183%</td> <td>118%</td> </tr> <tr> <td>Three months after stock</td> <td>4-Aug</td> <td>126</td> <td>144.6</td> <td>13.9</td> <td>22-Aug</td> <td>127</td> <td>165.0</td> <td>14.1</td> <td>29-Aug</td> <td>127</td> <td>160.7</td> <td>13.8</td> </tr> <tr> <td></td> <td></td> <td></td> <td>156%</td> <td>123%</td> <td></td> <td></td> <td>148%</td> <td>118%</td> <td></td> <td></td> <td>176%</td> <td>119%</td> </tr> <tr> <td>Four months after stock</td> <td>5-Sep</td> <td>125</td> <td>225.0</td> <td>16.3</td> <td>24-Sep</td> <td>125</td> <td>183.5</td> <td>15.2</td> <td>27-Sep</td> <td>125</td> <td>236.6</td> <td>15.5</td> </tr> <tr> <td></td> <td></td> <td></td> <td>243%</td> <td>144%</td> <td></td> <td></td> <td>165%</td> <td>127%</td> <td></td> <td></td> <td>259%</td> <td>134%</td> </tr> </tbody> </table> <p>(2) Target members' acquisition of technique. <b>At the beginning:</b> The awareness programme revealed that beneficiaries had poor knowledge on sea cucumber fattening. <b>At the end:</b> The beneficiaries have obtained adequate knowledge in terms of the biology of sea cucumber, pen construction, and monitoring methods through training and OJT provided by NARA.</p>			Indicators	Mandaithivu				Gurunagar				Navanthurai				Date	Specimen (pcs.)	Weight (g)	Length (cm)	Date	Specimen (pcs.)	Weight (g)	Length (cm)	Date	Specimen (pcs.)	Weight (g)	Length (cm)	Base Line	28,28-Apr	926	92.5	11.3	18,25-May	1079	111.4	12.0	29,31-May	853	91.2	11.6	One month after stock	4-Jun	120	87.6	11.4	23-Jun	129	114.0	12.5	29-Jun	139	152.8	14.3				95%	101%			102%	104%			168%	123%	Two months after stock	4-Jul	131	131.6	13.9	20-Jul	127	145.4	15.5	29-Jul	126	167.1	13.7				142%	123%			131%	129%			183%	118%	Three months after stock	4-Aug	126	144.6	13.9	22-Aug	127	165.0	14.1	29-Aug	127	160.7	13.8				156%	123%			148%	118%			176%	119%	Four months after stock	5-Sep	125	225.0	16.3	24-Sep	125	183.5	15.2	27-Sep	125	236.6	15.5				243%	144%			165%	127%			259%	134%
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Institutional aspect	<p>(1) Involvement of socially vulnerable people in the activity: - Out of the total 24 direct beneficiaries in the pilot project, 18 beneficiaries are IDPs. In particular, all the beneficiaries in Mandaithivu and Gurunagar are IDPs. In the case of Mandaithivu, eight beneficiaries consist of three new IDPs from Vanni and five old IDPs.</p> <p>(2) Understanding of target members and FCS executives on cost and benefit structure of sea cucumber fattening: <b>At the beginning:</b> They already knew that sea cucumber had high demand and had dealings at LKR 15,000/kg in dry weight. <b>At the end:</b> It is revealed that the total production cost for one culture cycle (10months) including initial investment and operation cost would be at LKR 238,330 for a set of pen (25m x 25m) with stock of 1,250 spats. Benefit out of the pen after 10 months would</p>																																																																																																																																																	

		<p>be at LKR 415,000 with estimated growth of 350g/pc. and survival rate of 90%, thus net profit per pen would be estimated at LKR 180,470 (profit rate of 43%). This tentative analysis was shared among beneficiaries and executives of target FCSes.</p> <p>(3) Commitment of target FCSes to the continuity of the activity. They have reserved commitment of the continuity of the activity until they confirm the successful business potentiality of sea cucumber fattening. If it succeeds, they will increase pens with their own capital mixed with 20% benefit share to FCS in the pilot project and start sea cucumber fattening in adjacent waters.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective -- The pilot project aims at confirming sea cucumber culture potential in terms of biological factor, site suitability and cost effectiveness, thus it will create an alternative livelihood activity in coastal communities in Jaffna.</p> <p>a) Biological factors</p> <ul style="list-style-type: none"> <li>- Sea cucumber may excavate the sea bottom and escape out of a pen, therefore the pen installation requires certain devices to prevent its escape. The technique of the present pen installation has been successfully selected.</li> <li>- Handling of the spats during the stock may affect the growth rate and mortality, and the beneficiaries have understood it.</li> </ul> <p>b) Site suitability</p> <p>According to weight and length measurement after the stock, the sites in Mandaithivu and Navanthurai turned out to be suitable. Water off Navanthurai is located inside the lagoon (the westward of Pannai causeway) and it is abundant in nutrients for spat growth; water off Mandaithivu is near the wild spat collection site, and therefore it is in suitable environment for wild spat growth of sea cucumber.</p> <p>c) Cost effectiveness</p> <p>Cost effectiveness has been verified through analysis of growth rate, mortality, market information, and production cost. The tentative result shows 43% of the profit rate as mentioned above. NARA will reveal actual cost and benefit in March 2012.</p> <p>(2) Effects of external factors:</p> <ul style="list-style-type: none"> <li>- The Team has realized that there is a wild spat collection season in a year. Spat stocking to the pen was delayed for two months to wait for the season.</li> <li>- Growth of the mosses on the surrounding fence will affect the water circulation, so it may limit the nutrition flow for spats, and the fence may be broken by water pressure of sea waves.</li> </ul>
	Impact	<p>(1) Achievement of the Project objective: -- Assist local people of the district including IDPs and strengthen CBOs:</p> <ul style="list-style-type: none"> <li>- Among total 64 participants of the ratification meeting in March and April, 2011, five new IDPs and 15 old IDPs were included.</li> <li>- Among total 30 participants of the biological training in June, 2011, eight old IDPs were included.</li> </ul> <p>(2) Expected impact other than the Project objective:</p> <p>DFAR in Jaffna has been interested in sea cucumber fattening in Jaffna District, whereas it was passive when PDP Jaffna was planning the sea cucumber fattening, owing to the negative report on potentiality of aquaculture development in brackish water of Jaffna. Now, DFAR in Jaffna is more willing to develop district aquaculture.</p>
	Sustainability	<p>(1) Institutional aspect:</p> <ul style="list-style-type: none"> <li>- NARA, the implementing partner of the pilot project, has committed to continuing sea cucumber fattening with three communities after the end of PDP Jaffna. This is because NARA feels high potentiality of sea cucumber farming, which will bring a new income source for coastal communities in the near future. According to information, it has succeeded the sea cucumber breeding for complete cycle of aquaculture production recently in their research centre at Kalpitiya, Puttalam.</li> </ul>

		<p>(2) Financial aspect:</p> <ul style="list-style-type: none"> <li>- NARA has committed to continuing the activities for the period that the present pen can be durable; i.e., for about two more years. It has taken responsibility of resources survey for aquaculture development in Northern Province and has been allocated LKR 35 million for their activities in 2011. Sea cucumber activities would be carried out with the budget of NARA.</li> <li>- Once the beneficiaries harvest the cultured sea cucumber and realize the business potentiality, beneficiaries and other members of the FCSes would invest their own money to increase pens and stock the spat by themselves.</li> </ul> <p>(3) Establishment and prevalence of technical aspect: Beneficiaries of 24 fishermen from three FCSes have obtained necessary technical and biological knowledge through several training sessions and OJT provided by NARA. They have said that they will share those skills and knowledge to adjacent fishermen when they will work together for sea cucumber farming.</p>
Recommendations		<p>(1) Contributing factors to the success of the pilot project: Many fishermen in Gurunagar catch matured sea cucumber with several fishing techniques such as trawl fishing with one-day boat and they sell it to the sea cucumber processor in Navanthurai. They know that dry sea cucumber is an expensive commodity for international markets. These people are candidate sea cucumber farmers in the future because one-day boat trawl fishing was banned in December 2010 and they lost their fishing means to catch sea cucumber. Their motivation should be utilized for further development of the pilot project.</p> <p>(2) Impeding factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- At the first moment of the activity, all the concerned FCSes in Navanthurai got together and discussed profit sharing when harvesting to solve the complaint induced in the beneficiary selection procedure. This kind of effort is important for trouble-free sustainable operation.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Cost and benefit structure must be announced and shared with as many people as possible to invite production motivation for more people. This is a core action for expanding the impact of the pilot project.</li> </ul>
Lessons Learned		<p>Lessons learned for the project formulation for future project or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- In view of sustainable sea cucumber farming, technical development of sea cucumber breeding is necessary to complete an aquaculture production cycle. The effort of NARA in this field should be encouraged. Expectation is to set up a seed production centre in Jaffna in the near future.</li> <li>- NAQDA should take responsibility for development of aquaculture; however, it has no branch office and no staff in Jaffna District. In order to promote development of a district aquaculture, Jaffna District should invite a representative office of NAQDA as early as possible.</li> </ul>

#### 8.4.4 Pilot Project FC-4

Pilot Project Title (No.)	Introduction of Fish Aggregating Device (FAD) to Small-scale Fisherman (FC-4)	
Achievement	Technical aspect	<p>(1) Target members' acquisition of technique on FAD. <b>At the beginning:</b> They had similar experience of installing an object on the bottom of the sea, but they gave up it owing to improper technique for stable setting. <b>At the end:</b> Beneficiaries participating in preparation of two FADs have learned new technique in construction and installation of FADs.</p> <p>(2) Target members' catch of fish around FAD. <b>At the beginning:</b> Fishermen caught little fish near the site. <b>At the end:</b> Twenty days after the FAD installation, one of the beach seine net owners used his net closer to the FAD and caught 35 pieces of <i>Paraw</i> (giant trevally) weighing as much as 50 kg. They usually do not catch this kind of fish in their beach seine net. Actually this fish catch is the effect of the FAD.</p>

		<p>(3) Target members' improvement of income from their fishing with the FAD:</p> <ul style="list-style-type: none"> <li>- The beach seine owner mentioned above sold the 50 kg of fish caught around the FAD at LKR 20,000 in total.</li> <li>- The Team tried to monitor the catch effect of the FADs with several methods, but it was difficult to get written data, although several beneficiaries went to the FAD sites and caught fish.</li> </ul>
	Institutional aspect	<p>(1) Management and maintenance of the FADs by target FCS.</p> <ul style="list-style-type: none"> <li>- Beneficiaries belonged to Katkoyalam FCS monitored the FADs occasionally but both FADs were cut by fishermen in adjacent area. The first case is that drift nets entangled with the FAD and the fishermen cut the anchor rope of the FAD to remove their nets. The second case is that the beneficiaries restricted the fishermen in adjacent area caught fish around the FAD, and they cut anchor rope of the FAD with anger. More notification of FAD to fishermen in broader area and consensus of rules on how to use FAD are required to develop FAD project.</li> </ul>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective -- This pilot project aims to establish effective fishing grounds for small-scale fishermen; FADs can provide fishermen with an easy access to fishing grounds with less fuel consumption:</p> <p>a) Income generation:</p> <ul style="list-style-type: none"> <li>- The Team could get only the spot information on income generation for beneficiaries of the FADs as mentioned above. One reason for it is due to difficulties in collecting written data from beneficiaries; another reason is the loss of both FADs within three months after the installation.</li> <li>- At the least, PDP Jaffna has verified that technically the FADs attract pelagic fish in the northern coast of Jaffna peninsula because the local fishermen caught 50 kg of giant trevally around the FADs, and this kind of fish is only available in the deep sea.</li> </ul> <p>b) Degree of empowerment as FCS:</p> <ul style="list-style-type: none"> <li>- Beneficiary fishermen belonging to Katkoyalam FCS have obtained new technique for construction and installation of FADs. Therefore, the FCS can install the FADs in the future.</li> <li>- The present problem is lack of consensus among fishermen in the broader area on a rule of using FADs. This kind of issue is beyond the capacity of one or several FCSes. The Team explained this FAD experience to representatives from FCSes belonging to Vadamarachchi North FCS Union during a workshop to share the lessons learned in order to promote further development.</li> </ul> <p>(2) Effects of external factors:</p> <p>A hot issue for fishermen in Jaffna at present is illegal fishing by a huge number of Indian trawlers. Introduction of new techniques such as FAD (floating type) and bottom type of artificial reef may be one solution to protect their fishing ground physically from illegal trawlers.</p>
	Impact	<p>(1) Achievement of the Project objective -- Assist local people of the district, including IDPs, and strengthen CBOs:</p> <p>About 50 fishermen operate hook and line fishing with traditional non-motorized fishing craft called <i>Kattumaram</i> in Katkoyalam. These fishermen include socially vulnerable people such as IDPs. They remain with small scale fishing, due to lack of capital. The fishing ground they can use is limited within 3-4km from the shore. If the technique of FAD is established here, they would have fishing ground near shore. This pilot project only verified the possibilities of this technique for the community in the future.</p> <p>(2) Expected impact other than the Project objective:</p> <p>The Team recommended introducing a gill net fisheries management system in the water along the northern coast of Jaffna Peninsula in a</p>



		workshop of Vadamarachchi North FCS Union. At the same time it explained the FAD experience. If these two issues are integrated for the wise use of the fishing resources, the FAD technique may be accepted by more fishermen in Jaffna.
	Sustainability	<p>(1) Institutional aspect: The involvement of a few FCSes is not adequate to continue this activity under the present circumstances. Broader consensus is needed among fishermen in the district to develop it. A discussion on FAD experience during the workshop of the FCS Union is the first step towards broader participation of local fishermen.</p> <p>(2) Financial aspect: It is possible to construct FADs with local material, such as abandoned log of <i>Kattumaram</i>, and installation will be easy, thus fishermen can construct and install FADs with little financial burden.</p> <p>(3) Establishment and prevalence of technical aspect: Beneficiaries have obtained the technique in terms of construction and installation of FADs. However, they need to formulate a rule of the FAD's use and practice it.</p>
Recommendations		<p>(1) Contributing factors to the success of the pilot project: The Team realized through OJT for construction and installation of FADs that fishermen had fundamental technique on rope works and seamanship. Thus, it is easy for them to develop FAD technique, since they have already visible ideas of FADs and suitable local material.</p> <p>(2) Impeding factors to the success of the pilot project: FAD is quite a new technique for fishermen in Jaffna, and lack of rules on how to use it caused the loss of the FADs within three months after the installation. Efforts to establish the rule are indispensable for developing FAD technique in the district.</p> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact: Continuation of discussion is required to share the consensus for the installation and to formulate a rule how to use it, as observed in Indonesia where fishermen pay a charge to owners of an FAD whenever they use it.</p>
Lessons Learned		<p>Lessons learned for the project formulation for future project or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Social consensus, rather than technical issues, is an essential matter to develop FAD technique. Awareness-raising efforts should be taken well before the implementation of the activities in order to form consensus among fishermen. This is a lesson learned about the importance of social relationships in spreading new techniques over areas.</li> </ul>

#### 8.4.5 Pilot Project FC-5

Pilot Project Title (No.)	Construction of Fish Auction Halls to Assist FCSes (FC-5)	
Achievement	Technical aspect	<p>(1) Quality improvement of landed fish with newly constructed fish auction halls. <b>At the beginning:</b> They auctioned fish under the shade of a tree or even without any shade under poor hygienic conditions. <b>At the end:</b> Newly constructed five fish auction halls at locations with access road, contribute to the improvement of landed fish in quality.</p>
	Institutional aspect	<p>(1) Promotion of fisheries-related livelihood measures implemented by socially vulnerable members. <b>At the beginning:</b> FCS had limited financial background to provide support to members for their income-generating activities. <b>At the end:</b> Beneficiaries have received training and OJT on dry fish processing and coir fibre production at several sites. FCSes supported in selecting beneficiaries and providing venues for the training. They are to give favour in providing fish for the further promotion of dry fish production through operation of the new fish auction halls.</p> <p>(2) Target FCSes' operation, management, and maintenance of the fish auction halls. <b>At the beginning:</b> They had no fish auction hall.</p>

		<p><b>At the end:</b> According to their O&amp;M plan, they recruit three vulnerable members for weighing fish while auctioning and cleaning.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective -- The pilot project aims at activation of FCSes in the district, of which activities have weakened due to conflict.</p> <p>a) Income generation:  <b>At the beginning:</b> Income of FCSes is limited only to membership fee.  <b>At the end:</b> The FCSes have an income source in operating and managing the fish auction halls, such as commission for weighing of landed fish.</p> <p>b) Degree of empowerment as FCS:  Executives of target FCSes have received a series of training sessions for capacity development, including responsibility of FCS, leadership, financial management, and community monitoring system. They learned how to talk in front of people, characteristics of leaders, and ideal leaders in the leadership training; modern policy of cooperative societies, how to access financial support, and laws &amp; regulation in the training for responsibility of FCS and financial management. Training for financial management and responsibility of FCS must be practically useful for the empowerment of executives of FCSes.</p> <p>(2) Effects of external factors:  It took more than two months to obtain land permits for construction of facilities such as fish auction hall due to change of administrative procedures, which affected the pilot project schedule.</p>
	Impact	<p>(1) Achievement of the Project objective -- Assist local people of the district including IDPs, and strengthen CBOs:</p> <ul style="list-style-type: none"> <li>- Among a total of 261 participants of the awareness meeting in March and April, 2011, 60 new IDPs, 25 old IDPs, and 3 WHFs were included.</li> <li>- Among a total of 278 participants in needs assessment in April 2011, 69 new IDPs, 15 old IDPs, and 80 WHFs were included.</li> <li>- Among a total of 121 participants in leadership training conducted in April and May 2011, 39 new IDPs, 16 old IDPs, and 20 WHFs were included.</li> <li>- Among a total of 360 participants of group communication for dynamic community conducted in May, June and July 2011, 128 new IDPs, 21 old IDPs, and 73 WHFs were included.</li> <li>- Among a total of 87 participants in business management training conducted in June and July 2011, 24 new IDPs and 28 WHFs were included.</li> <li>- Among a total of 63 participants in community monitoring training conducted in July 2011, 14 new IDPs and 12 WHFs were included.</li> <li>- Among a total of 46 participants in finance management training conducted in July 2011, 9 new IDPs and 6 WHFs were included.</li> <li>- Among a total of 84 participants in operation and management plan conducted in July 2011, 12 new IDPs and 3 WHFs were included.</li> <li>- Among a total of 42 participants in dry fish processing training conducted in July 2011, 20 new IDPs and 12 WHFs were included.</li> </ul> <p>(2) Expected impact other than the project objective:  Community people obtain income from construction work, since Sewalanka Foundation, the implementing partner of the pilot project, sub-contracted with FCSes at several sites.</p>
	Sustainability	<p>(1) Institutional aspect:  FCSes employ socially vulnerable family members for cleaning the fish auction halls and for weighing fish to strengthen the mutual assistant system under FCSes.</p> <p>(2) Financial aspect:</p>

		<p>According to O&amp;M plan of the auction halls, FCSes design several income sources out of management of the halls such as commission for weighing fish catch. This is a stable income source for FCSes in addition to their membership fee. They can use it for maintenance of the hall.</p> <p>(3) Establishment and prevalence of technical aspect: Through this pilot project, PDP Jaffna provided a series of training sessions for capacity building of FCSes and for enhancement of social inclusion of socially vulnerable people through strengthening of FCSes.</p>
Recommendations	<p>(1) Contributing factors to the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The success of the pilot project depends heavily on the character and capability of leaders of FCSes. The leader of an FCS is placed at a hub of the target community. This fact can be said to apply to both construction work and providing training. Good activity effects are obvious; e.g., in scheduling activities or calling people for meeting and training if the FCS has a capable leader. Having a capable leader is the first condition for success of the pilot project.</li> </ul> <p>(2) Impeding factors to the success of the pilot project:</p> <p>The following two cases taught the Team that this kind of issue is complicated and takes time to clear in this country.</p> <ul style="list-style-type: none"> <li>- Land ownership issue: The purpose of this pilot project is to activate FCSes through strengthening production infrastructure and providing training for capacity development. Therefore, the Team designed the pilot project in which the constructed fish auction halls will be handed over to FCSes. Through the administrative procedure, however, the Team realized that if fish auction halls are built on land belonging to a Local Government, the management power of the auction halls should be under the Local Government, whereas fish auction halls built on government land can be handed over to FCSes which obtain the management power of the halls. Thus, the Team decided to construct fish auction halls only on the government land at five sites, and gave up three other sites.</li> <li>- Land permit issue: The Team estimated one week for obtaining land permits for construction work issued by DS offices. However, it actually took more than two months. This is because the administrative procedure has changed since January 2011 and the Team had to apply to the land office of Northern Province, and obtain permission from Coast Conservation Department under the Ministry of Defence. Due to this, other activities were affected and re-scheduled.</li> </ul> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- As a result of discussion with beneficiaries, the Team designed a warehouse in Kachchi and Katkivalam with two pieces of hanging wood at both sides in the storeroom for storing outboard engines. If these FCSes succeed in effective management of this type of warehouse, this will lower fishermen's burden very much.</li> </ul>	
Lessons Learned	<p>Lessons learned for the project formulation for future project or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Issues on land ownership and land permission are difficult for foreigners to realize in advance, and the Team has learned that it takes much time to clear the paperwork as mentioned above. Even if foreign donors know this kind of issue well in advance and expect some time for the project schedule, the conditions often change, and thus they should take enough leeway for project scheduling.</li> </ul>	

### 8.4.6 Pilot Project FC-6

Pilot Project Title (No.)	Reconstruction of the Regional College of Fisheries and Nautical Engineering (FC-6)	
Achievement	Technical aspect	<p>(1) Facility of the Fishery College was reconstructed in accordance with local quality standards.</p> <ul style="list-style-type: none"> <li>- At the time of completion/ the end of August 2011</li> </ul> <p>(2) Equipment and education materials were procured.</p> <ul style="list-style-type: none"> <li>- At the time of completion/ the end of August 2011</li> </ul> <p>(3) Instructors' and trainers' acquisition of new techniques on offshore fisheries, safe navigation, seafood processing, and fish farming.</p> <ul style="list-style-type: none"> <li>- <b>At the beginning:</b> Teaching staff of the College had limited knowledge on offshore fisheries, safe navigation, seafood processing, and fish farming.</li> <li>- <b>At the end:</b> They have gathered enough knowledge to provide training on these subjects through trainer's trainings and site visits to the aquaculture pilot project sites.</li> </ul> <p>(4) Trainees' acquisition of new techniques on offshore fisheries, safe navigation, seafood processing, and fish farming:</p> <ul style="list-style-type: none"> <li>- <b>At the beginning:</b> Youth &amp; other fishermen had poor knowledge on offshore fisheries, safe navigation, seafood processing, and fish farming.</li> <li>- <b>At the end:</b> The College provided a training course for seafood processing for 18 trainees from 5 to 9 May 2011 based on the output of the trainer's training in Colombo held from 21 to 25 February 2011.</li> </ul>
	Institutional aspect	<p>(1) Capacity of O&amp;M of the College has been improved by the O&amp;M and office management workshop:</p> <ul style="list-style-type: none"> <li>- The O&amp;M workshop has been carried out in September 2011</li> </ul> <p>(2) Constant implementation of practical fisheries education and training for applicants of training in the district and Northern Province as well.</p> <ul style="list-style-type: none"> <li>- <b>At the beginning:</b> They had conducted the practical education occasionally by using existing poor facilities.</li> <li>- <b>At the end:</b> They conduct quality training by using new instruments and equipment.</li> </ul>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective -- The pilot project aims at capacity building of the college so as to make it the leading and prominent fisheries and nautical engineering training and education institute in the region.</p> <p>a) Degree of empowerment of the College:</p> <ul style="list-style-type: none"> <li>- The College is satisfied with quality and management of the construction work.</li> <li>- Lecture staff and crew members are recruited by NIFNE and they have received several session of trainer's training provided by PDP Jaffna for their capacity development. They have started their training programme with the new staff members.</li> </ul> <p>(2) Effects of external factors: Implementation of their training programme heavily depends on the budget allocation from the head office of NIFNE.</p>
	Impact	<p>(1) Achievement of the Project objective -- Assist local people of the district, including IDPs, and strengthen CBOs:</p> <ul style="list-style-type: none"> <li>- Types of training courses were increased by virtue of the new facility and equipment.</li> <li>- Fishermen and youths are going to get the quality training from this College. Usage of new fishing vessels and fishing equipment</li> </ul>

		<p>enhance quality and quantity of the training.</p> <ul style="list-style-type: none"> <li>- The practical training for fish processing and other new seafood products benefits socially vulnerable people such as female-headed families who have limited income sources at present.</li> </ul> <p>(2) Expected impact other than the Project objective: Fishermen and youth who live in other districts of Northern Province also benefit from the renovated training programmes of the College.</p>
	Sustainability	<p>(1) Institutional aspect:</p> <ul style="list-style-type: none"> <li>- The College is one of eight similar colleges in Sri Lanka under the auspices of NIFNE. It is the only institute for practical education in the field of fisheries in not only Jaffna District but also Northern Province.</li> <li>- They have already four permanent technical staff members and five crews. They can run their training programme.</li> </ul> <p>(2) Financial aspect:</p> <ul style="list-style-type: none"> <li>- NIFNE, Colombo allocates budget for the annual expenditure of the College every year for its principal activities.</li> <li>- When the College conducts the training for youth or fishermen, they receive token fee for operational cost of instruments and enrolment.</li> </ul> <p>(3) Establishment and prevalence of technical aspect:</p> <ul style="list-style-type: none"> <li>- The College has enough technical staff for their activities because two new lecturers have already been recruited; five crews for a one-day boat and a 18-foot FRP boat have been recruited, thus improved technical training programme can be introduced and developed.</li> </ul> <p>(4) Operation and Maintenance:</p> <ul style="list-style-type: none"> <li>- The College is required to use acquired knowledge and skills of O&amp;M through the pilot project and O&amp;M action plan.</li> </ul>
Recommendations		<p>(1) Contributing factors to the success of the pilot project:</p> <p>Most of the fishermen in Jaffna District wish to get the training on advanced fishing techniques such as GPS navigation, usage of fish finder, compass reading, and OBM repairing. Assistance for this pilot project fulfils most of the technical demands of the local fishermen at present, thus high motivation of trainees is expected. More than 17,000 fishermen are engaged in fishing in Jaffna District.</p> <p>(2) Impeding factors to the success of the pilot project:</p> <p>The College doesn't have their vehicle to conduct mobile training to extend their service in other districts such as Mullaithivu and Kilinochchi; this will be the next issues for development.</p> <p>(3) Recommendations to the pilot project to secure sustainability and expand its impact:</p> <p>Considering a need of establishing a diploma course, vacant space in the compound of the College can be utilized for building new facilities, such as a dormitory, in the future.</p>
Lessons Learned		<p>Lessons learned for the project formulation for future project or future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Empowerment of the Fisheries College is one of fundamental conditions to realize three development categories of fisheries sector in the district, i.e. establishment of sustainable system for coastal fisheries, offshore fisheries development and aquaculture development. In this sense, the training programme on resource management, safety navigation for offshore fisheries and fish farming should be the core subjects in the educational programme to be developed by the College.</li> </ul>

## 8.5 Monitoring, Evaluation, and Lessons Learned of Pilot Projects for Women in Community

The following chart indicates the results of the monitoring and evaluation of the Women in Community pilot project and the lessons learned from it.

### 8.5.1 Pilot Project CC-1

Pilot Project Title (No.)	Business Development and Marketing of Coir and Palmyrah Products (CC-1) Velanai East WRDS, Velanai DS Division	
Achievement	Technical aspect	<p>(1) Target members' acquisition of processing techniques. In the beginning: about 10 members (8% of the registered members) had coir producing skills (in broom and rope making) but were producing virtually no production scale or profits. By the end: 40 members (23% of the registered members) received technical training. The number of skilled coir producers increased to 20. They gained new techniques in rug making, large-scale rope making (using equipment), and broom making. A further 20 members gained skills in Palmyra handicrafts, such as basket-, bouquet-, wall hanger-, cake box-, kitchen utensil-, and flower tray-making.</p> <p>(2) Varieties of coir products made by the target members. In the beginning: ropes and brooms. By the end: <b>Coir Products:</b> Rugs, ropes of different sizes, and brooms. Thick rope was demanded by fishermen. <b>Palmyrah Products:</b> Baskets, bouquets, wall hangers, cake boxes, kitchen utensils, and flower trays. Their wall hangers had unique designs that could not be found easily in the market of Jaffna District.</p> <p>(3) Degree of completion of project activities: All the planned activities, such as building construction, equipment procurement, and training (both capacity building and technical), have been completed.</p>
	Institutional aspect	<p>(1) Capacity of the WRDS (organizing meetings, record keeping, property and financial capacity, network, rules, and system). In the beginning: Prior to the pilot project, the WRDS held monthly meetings in which few members participated (with a 10% average participation rate) and had no networks with others. They also lacked significant property, other than the Revolving Loan Fund (RLF), which was around LKR 50,000. They had no source of regular income or system of rules, except a loan interest of LKR 500/month. By the end: The number of registered members increased from 120 to 170 (the number of active members went from 30 to 60). In addition to their regular monthly and committee meetings, they held spontaneous ones to discuss urgent matters, which improved member participation by facilitating agenda proposals and idea generation. They gained new assets, such as their own building and equipment. They acquired new means of income by renting their equipment and center. Their network was widened and now included, for example, the Rural Development Officer (RDO), the Divisional Secretariat, Pradeshiya Sabha, the Industrial Development Board (IDB), and the Palmyrah Development Board (PDB). Trained members have established linkages with resource persons through their technical Palmyrah- and coir-making training.</p> <p>(2) Involvement of socially vulnerable people. In the beginning: None By the end: (cumulative from February to July): participants in the awareness meetings and training programmes included 36 Vanni IDPs, 6 old IDPs, 49 WHFs and 2 disabled members.</p> <p>(3) Understanding of the relevant government officers In the beginning: GS (Grama Sevaka) and the RDO participated in all the WRDS' functions. When there were no relevant activities, the government officials did not visit the WRDS more than once or twice. By the end: the GS and RDO closely monitored the activities of the WRDS. The RDO visited the WRDS at least once a month and the GS more than twice a month. During the construction time, they often visited the site more than twice a month and provided needed support and advice. Further, the Divisional Secretary (DS) and other officers</p>

		from the DS offices had established a relationship with the WRDS by mobilizing it and the implementing agency.
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: the pilot project aims to empower the WRDS by addressing one of the village women’s most pressing needs—income generation:</p> <p>a) Income generation:  In the beginning: the average income from coir production was about LKR 3,000/month.  By the end: the average income is expected to increase to LKR 10,000/month according to the implementing agency, because of the improved quality and new marketing linkages. They did not yet (as of July 12) profit significantly from their products because fewer of them were being produced. Regarding marketing, the PDB and the sales outlet of JSAC (the NGO implementing agency) had agreed to purchase members’ products. The RDS President had also agreed to arrange a sales outlet in a nearby village that represents a good marketing opportunity for Palmyrah handicrafts, as it is frequently visited by tourists and pilgrims from the south. The Velanai East FCS also had started to order thick coir rope for use in fishing.</p> <p>b) Degree of social empowerment (in terms of institutional capacity, management capacity, sales capacity, production capacity, sustainability, and learning ability):<sup>4</sup>  Production capacity has increased remarkably, as members gained technical production knowledge and their own facilities (e.g., their own building and equipment). The building was used as a place of production, storage, display, and sales.</p> <p>(2) Effects of external factors:  Difficulties in obtaining sand and rubble caused delays and additional expenses for the implementing agency. However, politicians helped the WRDS overcome the problem by making the DS office aware of the need for sand: politicians were informed of the pilot project when they attended the construction ceremony.</p>
	Impact	<p>(1) Achievement of the Project objective:<sup>5</sup> Assisting the local people of the district (including IDPs) and strengthening CBOs.  Forty women members benefited from the project, including 36 Vanni IDPs, 6 old IDPs, 49 WHFs and 2 disabled members (cumulative). The WRDS was strengthened through its improved facilities and empowered members. Members’ idle time was converted into productive time. Beneficiaries’ family members were aware that the activities were profitable and were supportive. Through the pilot project, the beneficiaries and others came to appreciate local resources and traditional skills as well as introduced new techniques.</p> <p>(2) Expected impact in addition to the Project objective:  Members who received technical training shared their skills and experience with family members and others in the community, including women who did not belong to the society. The improved WRDS performance will help government officers such as the GS and RDO implement other programmes.</p>
	Sustainability	<p>(1) Institutional aspect:  The WRDS was a registered organization, thus it is expected to sustain. They helped maintain the WRDS with their 35% participation rate, though a more active participation rate is still required.</p> <p>(2) Financial aspect:  The WRDS was not financially sustainable by project’s end. However,</p>

<sup>4</sup> These six measurements of the degree of social empowerment are drawn from the 2009 terminal evaluation for the “Project of Promotion of Self Management Enterprises of Women in Rural Area in Honduras.”

<sup>5</sup> Project objectives include the followings; 1) Assisting the local people of the district, including IDPs, in socioeconomic rebuilding by formulating a regional development plan and Road Maps and by implementing the pilot projects; 2) Indicating a way to reconstruct the regional economy by, among other things, strengthening various community-based organizations (CBOs) such as the Farmers’ Organization (FO), the Fisheries Cooperative Society (FCS), and women’s organizations.

		<p>initiatives have been taken to ensure a stable income for the WRDS through the proper use of the building and equipment (e.g., levying a charge on producers for using them) and the RLF. The WRDS increased its subscription fee, and RLF participation went from 10 members to 18.</p> <p>(3) Establishment and prevalence of technical aspects:  Members who were not selected for or were unable to participate in the training had already learned the skills while trained members engaged in production at the WRDS building or at home.  The trained members searched for a market, found a good design, and contacted the resource person to discuss technique. Furthermore, the PDB gave advanced technical training and provided a certain order.  The Velanai East FCS, operating in the same area as the WRDS, also played an important role in sustaining and developing WRDS activities as a raw material supplier and customer for coir products.  The GS/RDO did not plan to take the initiative in expanding their activities; however, they were aware of the WRDS' achievements and were willing to support them upon their request. Government officers need reliable partners in the community, and the WRDS can be one of them.</p>
<p>Recommendations</p>	<p>Contributing factors in the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Availability of raw materials in the area, availability of basic technical knowledge, and participants' interest;</li> <li>- Social mobilization, construction experience, and the implementing agency's wide network;</li> <li>- Transparent beneficiary selection - effectively facilitated by the implementing agency, PDP Jaffna, GS, and the RDO - that included socially vulnerable people;</li> <li>- Close monitoring by the implementing agency, including frequent communication with the society and suggestions on timing;</li> <li>- Establishment of marketing opportunities that enhanced sales and confidence among the producers;</li> <li>- Support from other CBOs and village youth in activities such as clearing the building's construction site and providing support for other society functions;</li> <li>- Appropriate advice from government officials on issues and challenges the society faced, such as selecting participants for the technical training;</li> <li>- Well-established networking between the WRDS and relevant stakeholders with the facilitation of the implementation agency. The JSAC connected WRDS with a raw material supplier, technical production advisors, and institutional management customers and advisors through the implementation of activities based on situational analyses.</li> </ul> <p>Factors impeding the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Due to the social system, some of the members selected for training were reluctant to participate in the other community. This was resolved during the project.</li> </ul> <p>Recommendations to help the pilot project secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Linking existing government systems (such as the DS) and technical service providers (such as the PDB, IDB, and the Coir Product Development Cooperative Society). It is also important to maintain current linkages;</li> <li>- Provision of more capacity development training to society members, especially that which enhances business development and management skills;</li> <li>- Promotion of products to organizations in the private sector that possess sales outlets.</li> </ul>	
<p>Lessons Learned</p>	<p>Lessons learned in project formulation in future projects or future developments of Jaffna:</p> <ul style="list-style-type: none"> <li>- Utilizing/promoting the available local resources and designing projects according to the needs and skills of the project area;</li> <li>- Extending into other business activities beyond the core project activity;</li> <li>- Appropriate selection of a target society with a strong and enthusiastic committee.</li> </ul>	



### 8.5.2 Pilot Project CC-2

Pilot Project Title (No.)	Business Development and Marketing for Food-processing Products (CC-2) Puloli South WRDS, Point Pedero DS Division	
Achievement	Technical aspect	<p>(1) Target members' acquisition of processing techniques. In the beginning: 20 members (29% of registered members) had skills in Jaggery sweet products but did not know the importance of procuring quality materials, following hygienic practices, or adding value for their products. By the end: the number of skilled members had increased to 35 (45% of registered members). They acquired new techniques, such as sap testing, calcium carbonate separation, and storage.</p> <p>(2) Quality of the products made by the target members. In the beginning: Jaggery's quality was poor and contained unacceptable levels of base content. It could not be stored for long. By the end: members learned techniques for improving the quality of the products and extending the period of preservation.</p> <p>(3) Degree of completion of project activities: All the planned activities, such as construction of the building, procurement of the equipment, and training, were completed.</p>
	Institutional aspect	<p>(1) Capacity of the WRDS In the beginning: the WRDS had no building to group activities (except sewing machines). They had limited contact with others and were exploited by the powerful; for instance, their products were purchased at low prices that were not negotiable. Financial records were not maintained. By the end: after the WRDS acquired its own building, it was used for meetings, training, Jaggery making, and storage. The WRDS was fully equipped for Jaggery making as a group and at a hygienic workplace. Improvements to their property and production skills boosted the quality of their products synergistically by increasing their motivation. Capacity-building training enabled them to identify social roles and responsibilities. They held regular and special meetings in which participants actively participated. They formulated rules for the use of equipment and the building. Furthermore, they maintained proper records, such as meeting minutes and attendance, financial records, and log books. Committee members, mainly the secretary and the treasurer, learnt more than 10 categories of necessary administration and management records, which enhanced the society's institutional capacity.</p> <p>(2) Involvement of socially vulnerable people. In the beginning: members involved in the WRDS activities included 7 Vanni IDPs and 4 WHFs. By the end: the above numbers had changed to (cumulative) 18 Vanni IDP, 6 old IDPs, 2 disabled and 19 WHFs. The WRDS tried to maintain "Family Details" records of the members' family details, such as the number of family members, name, age, job, and social payments receipts. This directed the attention of the committee members to their own society members and helped provide support to the members.</p> <p>(3) Understanding of the relevant government officers. In the beginning: the GS and RDO participated in all the WRDS' functions at its request. The RDO visited the WRDS once a month. By the end: the GS and RDO were involved in the WRDS' activities and were kept informed on the pilot project's activities. For example, the GS and RDO attended awareness and monitoring meetings. The GS closely monitored WRDS activities at least 2 to 3 times per month. During the construction period, they often visited the site (on an average of once a week) and provided needed support and advice. The Divisional Secretary and other officers from the DS offices established better relationships with the WRDS.</p>

Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: the pilot project aims to empower the WRDS by addressing one of the village women’s most pressing needs—income generation.</p> <p>a) Income generation:          In the beginning: the average income from Jaggery sweet production was about LKR 5,000/month.          By the end: the average monthly income was expected to increase slightly, to about LKR 5,010-6,000/month, but the increased price of sap had adverse effects.</p> <p>b) Degree of social empowerment:          As a result of awareness meetings and capacity building programmes, the members participated and discussed issues; membership increased by 10%. Society members organized events on their own and negotiated with stakeholders to find appropriate solutions to their problems (e.g., negotiating price with Cargills). Production and sales capacities increased. Nevertheless, their costing and value addition capacities need to be enhanced.</p> <p>(2) Effects of external factors:          Difficulties in obtaining sand caused delays in construction and additional expenses for the implementing agency. Further, a local person created issues at the initial stage of the programme that divided the society, but this was resolved. The PDB raised questions regarding the quality of the products and later agreed to supply quality sap for production. The increased cost of sap created problems in marketing the products at the price agreed with Cargills.</p>
	Impact	<p>(1) Achievement of the Project objective: assisting the local people of the district (including IDPs) and strengthening CBOs.          35 members benefited from the project, including 18 Vanni IDP, 6 old IDPs, 2 disabled and 19 WHFs. The WRDS was strengthened through its improved facilities and its empowered members.</p> <p>(2) Expected impact in addition to the Project objective:          Other members could benefit from the market linkage with Cargills. Other organizations (such as banks and the PDB) benefited from the strengthened WRDS: the banks raised the security of repayments and their lending amounts; the PDB were enabled to establish supplier linkages.</p>
	Sustainability	<p>(1) Institutional aspect:          Regular meetings and the active participation of members ensured the sustainability of the WRDS. The establishment of collective marketing and a credit facility encouraged the members to participate in the WRDS actively. Close monitoring by government officials helped the WRDS function properly.</p> <p>(2) Financial aspect:          The WRDS was not financially sustainable by the end of the project. However, initiatives were undertaken to ensure a stable income for the WRDS through the proper implementation of systems for building and equipment usage (e.g., levying a charge on producers for using them). The implementing agency (SOND, a local NGO) also planned to support the WRDS with a RLF grant.</p> <p>(3) Establishment and prevalence of technical aspect:          Members who received technical training shared their skills and experience with family members. The RDO was willing to share the WRDS’ experiences with other societies and RDOs; for example, he shared the WRDS’ progress with other RDOs at the monthly district-level meeting.</p>
Recommendations	<p>Contributing factors in the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- The community’s involvement, especially the support provided by village youth in activities such as site clearing for construction and assisting in society functions;</li> <li>- Active participation and contribution of the WRDS members, the GS, and the RDO;</li> <li>- The Community Center’s willingness to share their resources (i.e., land) with the WRDS;</li> </ul>	

	<ul style="list-style-type: none"> <li>- Availability of raw materials in the area, and the basic technical knowledge and interest of the participants;</li> <li>- Proper advice and guidance provided by government officials on issues and challenges faced by the society;</li> <li>- The existence of local and national markets for the product. The product was famous country-wide as the specialty of Jaffna District. The value of the product was also appreciated by local people.</li> </ul> <p>Factors impeding the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Unavailability of building materials (especially sand) for construction;</li> <li>- Members' difficulties in allocating full days for training, as most women were occupied with household responsibilities, caring for children, and wage labour;</li> <li>- Community divisions that prevailed in the initial stage through the influence of an individual;</li> <li>- Unexpected price increase of raw materials (i.e., sap), caused by the supplier;</li> <li>- Less analysis of business marketing made by the implementing agency;</li> <li>- Qualified raw materials (sap) supplier was found only at the PDB. No other supply option was available in the district.</li> </ul> <p>Recommendations to help the pilot project secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Continuous monitoring through existing government structures, such as the GS, the RDO, the DS office, and the PDB;</li> <li>- Regular updates on technical and market information;</li> <li>- Mobilization of society members to increase their production and meet larger orders;</li> <li>- Building the management skills required (especially accounting and decision-making skills) to meet a larger demand.</li> </ul>
Lessons Learned	<p>Lessons learned in project formulation in future projects or the future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Strengthening the relationship between project beneficiaries and related government structures is crucial in sustaining the qualified products and obtaining opportunities to build upon success, learnt from this case that the cooperative relationship with PDB was indispensable for the business development and the coordination by RDO would enhance the relationship;</li> <li>- Links with markets and technical service providers should be established;</li> <li>- Availability of raw materials and product marketing should be analyzed at the planning stage.</li> </ul>

### 8.5.3 Pilot Project CC-3

Pilot Project Title (No.)	Promotion of Mushroom Cultivation Business (CC-3) Aththiady WRDS, Jaffna DS Division	
Achievement	Technical aspect	<p>(1) Target members' acquisition of mushroom production techniques. In the beginning: 14 members (35% of registered members) had skills in mushroom production. By the end: the number of skilled members had increased to 24 (44% of registered members). They learned new techniques for improving the hygienic conditions and quality of mushrooms and establishing the conditions suitable for mushroom cultivation.</p> <p>(2) Quality of the products made by the target members. In the beginning: the product's quality was low due to unhygienic practices and low quality spawns. By the end: new techniques was acquired during the training for improving quality, and arrangements was made through the spawn laboratory newly established by PDP Jaffna.</p> <p>(3) Degree of completion of project activities: As of July 12, 70% of the project activities were completed. Equipment were procured and distributed. Technical training and study tour were provided. Spawn and sawdust procurement would have occurred at the same time in August. Marketing arrangements was explored with Cargills.</p>
	Institutional aspect	<p>(1) Capacity of the WRDS. In the beginning: out of 40 registered members, 25 (or 63%) actively participated. Prior to the PDP Jaffna's intervention, the WRDS did not conduct regular meetings. Record keeping was poor, and only minutes were maintained. The WRDS did not have any specific rules or system</p>

		<p>other than their constitution.</p> <p>By the end: registered membership has increased to 55 (a 38% increase). The WRDS conducted both regular and spontaneous meetings when needed. Record keeping also improved, including the use of financial records and log books. Furthermore, members established a revolving system for income generation support (by which beneficiaries had to repay 40% of the total support to the society). The responsibility for repayment raised members' motivation to tackle new income generating activities.</p> <p>(2) Involvement of socially vulnerable people.</p> <p>In the beginning: 3 WHFs were involved in mushroom production and 2 WHFs in sewing.</p> <p>By the end: (cumulative) 9 Vanni IDPs, 2 old IDPs, 6 WHFs had been involved.</p> <p>(3) Understanding of the relevant government officers.</p> <p>In the beginning: before the pilot project, the GS and RDO visited the WRDS as guests whenever it organized a function; this occurred once every 2 or 3 months on average.</p> <p>By the end: the GS and RDO had close links with the WRDS. The GS attended meetings every month to monitor and provide advice. Through the pilot project, relevant activities were held often (at least twice a month), and the WRDS invited government officials to them; this created opportunities to create a closer relationship and deeper understanding with the government officials. The DS-level officials were also aware of the project implemented by PDP Jaffna through the WRDS.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: the pilot project aims to empower the WRDS by addressing one of the village women's most pressing needs—income generation:</p> <p>a) Income generation:</p> <p>In the beginning: the average income from mushroom production was about LKR 3,000/month, but members could not continue their production for lack of quality spawn and sawdust.</p> <p>By the end: selected beneficiaries received technical training and equipment support. Arrangements were also made to get quality spawn and market their produce. This may improve their production and incomes; however, the price of spawn produced by DOA has not yet been fixed.<sup>6</sup></p> <p>b) Degree of social empowerment:</p> <p>As result of leadership, financial management training, and awareness meetings, the institutional capacity of the society increased.</p> <p>(2) Effects of external factors:</p> <p>The unavailability of sawdust was one of the main hindrances for the project. PDP Jaffna arranged to transport saw dust from the Matale District, but this was delayed due to unusually heavy rains in the area. The lack of quality spawn in the district was another obstacle; however, a spawn laboratory is functioning in August. There was also concern because the building planned as the mushroom sales outlet was not yet released by security forces, and the society president moved and left the society.</p>
	Impact	<p>(1) Achievement of the Project objective: assisting the local people of the district (including the IDPs) and strengthening the CBOs:</p> <p>28 women members benefited from the project (10 women received income generation assistance, and others benefitted from technical and capacity building training); this includes 9 Vanni IDPs, 2 old IDPs, 6 WHFs.</p> <p>(2) Expected impact in addition to the Project objective:</p> <p>Nothing in specific.</p>

<sup>6</sup> A cost-benefit analysis by DOA is in progress. It is expected to be completed by August. To fix the proper price, PDP Jaffna requested the establishment of a committee, consisting of DOA, the Mushroom Society, and the Seed Coop.

	Sustainability	<p>(1) Institutional aspect: The enhanced capacity of the members, their active participation, and close monitoring by government officers helped the WRDS ensure sustainability. The WRDS is expected to continue, even after the sudden departure of the president.</p> <p>(2) Financial aspect: By the end of the project, the WRDS was not financially sustainable. However, measures have been taken to ensure a stable income through the proper implementation of the revolving system.</p> <p>(3) Establishment and prevalence of technical aspect: The mushroom producers of Aththiyady WRDS are expected to become members of the district's Mushroom Society, which was also supported by PDP Jaffna. Their technical know-how can be expanded to others in the district through the Society. Though the WRDS was not able to open a sales outlet (given the occupancy of the society's building by security forces), market linkages through Cargills are likely to be established.</p>
Recommendations	<p>Contributing factors in the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Active participation and the enthusiasm of WRDS members and the support provided by the GS;</li> <li>- Technical training and support provided by DOA;</li> <li>- Mushrooms were in requisition, though the district's current market is still small;</li> <li>- The beneficiaries were motivated to initiate mushroom production because some of them could identify the needs of the area's products based on experience. Those with experience in the mushroom business motivated others;</li> <li>- Knowledge obtained through experience helped beneficiaries buy the appropriate equipment for the project.</li> </ul> <p>Factors impeding the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Unavailability of quality spawn and sawdust in the district; delay in releasing the community building occupied by the security forces;</li> <li>- The monopoly supplier of mushroom cabins delayed the supply of the cabins;</li> <li>- Coordination among stakeholders, a strategy for business development, and a pre-project situation analysis were lacking.</li> </ul> <p>Recommendations to help the pilot project secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- Arrangements for the continuous supply of raw materials (sawdust and spawns) should be secured for sustainable activities;</li> <li>- Creating market linkages is important;</li> <li>- Public awareness campaigns on mushroom consumption are needed.</li> </ul>	
Lessons Learned	<p>Lessons learned in project formulation in future projects or the future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Incorporating social mobilization and public awareness components into the core project component is important to sustainable income generation activities, especially when introducing rare products into an area;</li> <li>- Expanding similar income generation activities to other areas (e.g., bulk marketing and collective bargaining) would help create awareness and expand the market for the products;</li> <li>- Practical and technical activities with active performances would help involve government officials and induce their contribution and motivation.</li> </ul>	

#### 8.5.4 Pilot Project CC-4

Pilot Project Title (No.)	Small-scale Business Development (Poultry) (CC-4) Sirupidy WRDS, Kopay DS Division Thavalai Iyattalai WRDS, Chavakachcheri DS Division	
Achievement	Technical Aspect	<p>(1) Target members' acquisition of poultry techniques.</p> <p>In the beginning: a few members (around 20, or 7% of registered members) were involved in backyard poultry on a very small scale (two - five chickens). Most of them had no technical skills or equipment.</p> <p>By the end: the number of skilled members increased to 40 or 12% of registered members. They learned new techniques such as vaccination, feeding, and farm maintenance and were equipped with appropriate</p>

		<p>facilities such as sheds and drinkers.</p> <p>(2) Provision of chicks for the target members. In the beginning: 1,000 one-month-old chicks (25 chicks each for 40 beneficiaries). By the end: 1,000 chickens (that are expected to lay approximately 12,000 eggs during the pilot project period).</p> <p>(3) Degree of completion of project activities: All planned activities such as the procurement and distribution of chicks and equipment and the training were completed.</p>
	Institutional aspect	<p>(1) Capacity of the WRDS. In the beginning: the WRDSs had a limited area of operation and no proper system for revolving operations. By the end: the WRDSs increased their members from 100 to 130 in Sirupidy and from 180 to 205 in Thavalai Iyattalai. Both WRDSs established a revolving fund system with the consent of their members.</p> <p>(2) Involvement of socially vulnerable people. In the beginning: 1 Vanni IDP and 3 WHFs were involved in sewing and mixture training in Sirupiddi, while 25 widows were involved in sewing and local food processing in Thavalai Iyattalai. By the end: project participants included (cumulative) 57 Vanni IDPs, 6 old IDPs, 112 WHFs and 3 disabled people.</p> <p>(3) Understanding of the relevant government officers. In the beginning: the GS and RDOs got involved in the societies' activities at their request but not regularly. They did not visit the WRDS more than once or twice a month. By the end: the GS and RDO participated in the main project events, such as awareness meetings, beneficiary selection, equipment handovers, and review meetings. The Director of Animal Production and Health (DAPH) and area veterinary surgeons also supported technical training and vaccination.</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: the pilot project aims to empower the WRDS by addressing one of the village women's most pressing needs—income generation:</p> <p>a) Income generation: In the beginning: the average income from poultry was about LKR 2,500/month. By the end: the value of a chicken increased from LKR 240 (for a chick) to from LKR 800 to LKR 1,500 (for an adult). Average income is expected to rise to LKR 4,900/month (a 96% increase), though they had not yet sold a chicken.</p> <p>b) Degree of social empowerment: The societies' management capacity increased. They established a revolving system to provide support to other members and secure an income for the WRDS.</p> <p>(2) Effects of external factors: Changed climatic conditions adversely affected chicken growth and killed some of the chicks. However, this loss was immediately compensated by the implementing agency.</p>
	Impact	<p>(1) Achievement of the Project objective: assisting the local people of the district (including the IDPs) and strengthening the CBOs: 44 women in Sirupiddy and 36 women in Thavalai Iyattalai benefited from the pilot project, including 57 Vanni IDPs, 6 old IDPs, 112 WHFs and 3 disabled people. More members could benefit from the repayment system element of the income generation assistance.</p> <p>(2) Expected impact in addition to the Project objective: Beneficiaries' family members acknowledged the benefits of participating. Other village poultry growers also benefited from vaccination services, and the vaccinators gained income from their service. Linkages with other stakeholders, such as government</p>

		officers and financial institutions, had been established. The GS in Siruppiddy considered coordinating with the FO in the village for the benefit of both societies; for instance, the WRDS building could be used as a sales outlet for both eggs and vegetables grown by the FO. The WRDS would receive commission fees and catch more people through the variety of items available at the sales outlet.
	Sustainability	<p>(1) Institutional aspect: The capacity of the members was developed through their awareness meetings and training. This will help them sustain their societies.</p> <p>(2) Financial aspect: The revolving fund system for income generation will provide stable incomes to the WRDSs.</p> <p>(3) Establishment and prevalence of technical aspect: The vaccination system implemented by 4 volunteer vaccinators was remarkably successful: it helped 100% of the chicks survive until maturity. Facilities for growing chickens were established, and a technical handbook on poultry rearing written in a local language was distributed to members. The GS in Thavalai Iyattalai was motivated to share the WRDS' achievement at the annual GS meeting.</p>
Recommendations	<p>Contributing factors in the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Identification of suitable and interested beneficiaries through proper screening. Close discussions among the WRDS, the implementing agency, and the GS, and information gathering through home visits ensured the procedure's transparency and the creation of written analyses;</li> <li>- A 40% repayment plan enhanced the beneficiaries' motivation to succeed;</li> <li>- Support of government officers such as the GS, the RDO, the DS office, DAPH, and the experience of the implementing partner;</li> <li>- The volunteer vaccinator system, facilitated by the implementing agency, created linkages between villagers raising poultry and society members.</li> </ul> <p>Factors impeding the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Problems created by a person who did not meet the selection criteria.</li> </ul> <p>Recommendations to help the pilot project secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- A commitment from the relevant stakeholders to maintain the vaccination system;</li> <li>- Establishment of a community monitoring group to ensure the right selection and proper utilization of the social support.</li> </ul>	
Lessons Learned	<p>Lessons learned in project formulation for future projects and the future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Converting a grant into a revolving system would maximize the benefit to more members;</li> <li>- Repayment obligations increase sustainability because they cause beneficiaries to be serious about tackling challenges in order to benefit;</li> <li>- Technical and business development services should be coupled with the programme;</li> <li>- The implementation of small-scale business development projects at the individual level must include a market competition strategy. Without considering the aspects before the initiation of a project, the beneficiaries of a society become competitors, which may be problematic.</li> </ul>	

### 8.5.5 Pilot Project CC-5

Pilot Project Title (No.)	Support for the Widows' Society (CC-5) Chavatkaddu Widow's Society, Sandilipay DS Division	
Achievement	Technical aspect	<p>(1) Target members' acquisition of microfinance techniques. In the beginning: although two Self Help Groups (SHGs) existed with 10 members (9% of registered members), they had little knowledge of microfinance or of the procedures needed to obtain loans from financial institutions. By the end: four SHGs with 20 members existed (18% of registered members). Four members received bank loans totalling LKR 190,000. They were used for family fishing activities and small business.</p> <p>(2) Degree of completion of project activities: All planned activities, such as capacity building training, an exposure visit, and an introduction to microfinance systems, were completed.</p>

	Institutional aspect	<p>(1) Capacity of the Widows' Society. In the beginning: two SHGs with 10 members were defunct without having received any loans. Members were thus de-motivated. Furthermore, several widows had psychological problems. By the end: four SHGs were operating at various levels of performance. Members have now an understanding of the PAMP II microfinance loan scheme. Some members were willing to support the administrative elements of the society because they appreciated its value. However, the society just began to maintain a record of activities, such as meeting minutes, accounting, inventory keeping, and a log book. The society was also not engaged in any income generation activities.</p> <p>(2) Involvement of socially vulnerable people. In the beginning: 15 widows were involved in sewing, pickling, and rice flower training. By the end: (cumulative) 336 WHFs, 4 Vanni IDPs, 2 disabled people received benefits from the pilot project.</p> <p>(3) Understanding of the relevant government officers. In the beginning: the GS participated only in the Widows' Society's events, but its visits were not regular. By the end: the GS and the Women Development Officer (WDO) were aware of the society's activities and monitored its operations. They facilitated the registration of the Society (though this has not yet been achieved).</p>
Evaluation	Effectiveness	<p>(1) Achievement of the pilot project objective: the pilot project aims to empower the Widow's Society by improving its access to financial services and institutional capacity development:</p> <p>a) Access to financial services: In the beginning: none By the end: four loans were disbursed to four members (for a total amount of LKR 190,000), and members learnt how to access bank loans through training.</p> <p>b) Degree of social empowerment: The management capacity of the SHGs was improved through capacity development training. They also learnt loan mechanisms, including assessments. However, the capacity of the members was not sufficiently improved to allow them to undertake management. The society was still under the control of its leader, even though it played an important role as a platform by which widows could share their experiences and challenges.</p> <p>(2) Effects of external factors: Members' socioeconomic condition as widows (with its stigma and discrimination) hindered the achievement of the project objective. Widows tended to be kept away from community activities, causing them to have little interaction with others and thus depriving them of what they required to establish networks and create mutual reliance and assistance.</p>
	Impact	<p>(1) Achievement of the Project objective: assisting the local people of the district (including the IDPs) and strengthening the CBOs: About 60 widows benefited from the project, including 336 WHFs, 4 Vanni IDPs, 2 disabled people. The WRDS was strengthened through the reactivation of members.</p> <p>(2) Expected impact in addition to the Project objective: Two family members of beneficiaries benefited from the loan facility provided by the SHG member for their fishing activities. Other Widows' Society members benefited from the sharing of experiences during the exposure visit.</p>
	Sustainability	<p>(1) Institutional aspect: As the SHG members started to receive loans from the bank, their confidence increased. As a result, they remained in the Society and</p>



		<p>were highly motivated to gain more benefits through it.</p> <p>(2) Financial aspect: The Society did not identify a sustainable means of acquiring a stable income during the project period.</p> <p>(3) Establishment and prevalence of technical aspect: The SHG members received technical knowledge of the PAMP II microfinance programme. Their knowledge was gradually shared with other members. The GS and WDO became aware of these activities and provided monitoring. However, they were not willing to encourage others to engage in the loan scheme because of the risk of repayment failures. To expand the programme, bank field officers would need to play a role, adjusted to the repayment achievements of each borrower.</p>
Recommendations	<p>Contributing factors in the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Widows were organized in a Society;</li> <li>- The motivation of the members to be involved in microfinance and their capacity development training (especially group counselling support);</li> <li>- Involvement of the bank officers and their risk-taking in granting loans;</li> <li>- The good example set by a similar society, which helped motivation and learning in a peer environment.</li> </ul> <p>Factors impeding the success of the pilot project:</p> <ul style="list-style-type: none"> <li>- Dependent mentality of the members;</li> <li>- Psycho-social problems of the members;</li> <li>- Lack of democratic management, seen in the dominance of the leader and the lack of transparent practices. This prevented members from accepting active roles and weakened their independence;</li> <li>- Scarce opportunities for members to be exposed to community activities that would have created networks and allowed them to share experiences and get new ideas because of the cultural constraints on widows.</li> </ul> <p>Recommendations to help the pilot project secure sustainability and expand its impact:</p> <ul style="list-style-type: none"> <li>- More and new leaders, especially young widows, should have the opportunity to be trained in management skills and leadership, including team building techniques;</li> <li>- Government mechanisms such as society registration and getting the attention and support of the GS and the WDO should be integrated to facilitate democratic practices.</li> </ul>	
Lessons Learned	<p>Lessons learned in project formulation for future projects and the future development of Jaffna:</p> <ul style="list-style-type: none"> <li>- Implementing projects with reasonable time-frames and strong social mobilization components;</li> <li>- Designing project components according to the expectations and conditions of the target group with in-depth screening/analysis;</li> <li>- Collaboration with other societies and groups to create strong partnerships.</li> </ul>	

## 8.6 Summary of Lessons Learned from Pilot Projects

### 8.6.1 Summary of Lessons Learned from Agricultural Pilot Projects

#### (1) Overall

All the pilot projects for the agriculture sector are expected to finish successfully. All of them are expected to complete their planned activities and contribute to improve the productivity of agriculture in Jaffna. However, all of the construction work had delayed due to difficulty of procuring construction materials and machineries. Procurement of machineries and equipment took more time than expected since most of them were imported items. Due to the delay of construction and procurement, capacity building of concerned personnel and organizations through the operation of the facilities has not been sufficiently provided. It is advisable to schedule construction work and procurement with adequate margin of time. The pilot project period should be at least one and half years for verifying agricultural activities since most the products are harvested once a year in Jaffna.

## (2) Governmental institutions

The success of the pilot project is attributable to the commitment of concerned governmental institutions, including DOA, CCB, and DAPH. However, the Team observed there is a necessity for enhancing human resources of those institutions in terms of both quality and quantity. For example, AC-2 and AC-3 were scheduled to be completed within a few months, but it took eight months. DOA postponed training sessions many times due to other important events or unexpected accidents. This is partly because DOA does not have sufficient staff and a layer of staff for replacement is very thin. DOA is recruiting new staff to fulfil the vacant positions of extension officer. This should be further exhorted. On the other hand, farmers in Jaffna are very eager to learn new technology. To guide these farmers, the extension officers should be enhanced in their capacity and have more opportunities to catch up new technology.

Some of the government facilities are old and not functioning as expected. In case of DATC, only one lecture hall is in good working condition for the training programme and is also used as a conference hall for several DOA programmes and meetings, thus DOA schedule interfered with the training programmes of the pilot project. Also, facilities of DATC do not satisfy the training needs of latest technology. Therefore, Modernization of DATC building is highly recommended.

## (3) Farmers Society

Leadership is an essential part of establishing an organization. LIBCO Point Pedro had a long history and it was able to develop its sales outlet successfully and save money to purchase its own land. This success has been brought about by the good leadership of a veterinary officer posted at Point Pedro. The Mango Society and the Mushroom Society are still young and the leadership is not strong enough. They should be continuously supported until the leadership is sufficiently nurtured while avoiding the development of dependence on support. This process requires a long time and should be done by governmental institutions such as DOA and DAPH. In this context, capacity building of governmental institution is important as well.

## (4) Social Inclusion

Among a total of 1,193 participants of trainings in the agriculture sector, 13 new IDPs (1%), 37 old IDPs (3%) and 66 WHFs (6%) were included. A total of 116 socially vulnerable people received training under the 5 pilot projects in the agriculture sector, which is equivalent to 10% of the total number of recipients of the trainings. The figure of IDPs' participation is rather small compare to other two sectors, fishery and community. But, this does not mean the Team neglected IDPs in agriculture sector. From the observation in the field, many IDPs did not have their own land for cultivation, so that they tended to work as daily labours or agriculture labours. IDPs expressed their inability to attend the training programmes because of losing their one-day earning. Other donors seemed to provide stipends to attract them for attending the training. It is recommended to compensate the vulnerable peoples' earning when training programmes particularly target them.

## **8.6.2 Summary of Lessons Learned from Fisheries Pilot Projects**

### **(1) Introductory experience of co-management system**

Co-management is a system to manage fishery resources by integrating community-based fishery management and top-down style scientific resources management. Good support was realized when DFAR in Jaffna recommended introduction of registration system of the traditional stake net fisheries based on an initiative of FCS to the community-based stake net fisheries management. It was easier to get consensus among fisher's stakeholders for the integration of various fishing rules scattered in areas over the district level through a series of workshops on the Union and Federation levels. This is an introductory experience for fisheries co-management system because joint work was observed between DFAR which instructed the registration system with top-down style and FCS which initiated bottom-up type of community-based management.

Even though the traditional stake net fisheries management system has been formalized, it will be only on paper unless members of FCSes implement the management system with their keen attention. Constant follow-up and feed-back are essential for FCS Unions and the Federation, along with continuous supervision by DFAR.

### **(2) Consideration for aquaculture development with communities**

It is still the first stage of continuous trials for aquaculture development in Jaffna District at present. The trial-and-error process for a considerable period of time is required before successful development of aquaculture business in the district. In this context, when an aquaculture pilot project is planned in communities, it is advisable to assist the target communities with additional income source as well. Alternatively, one may select communities which are receiving other assistance from donor agencies or NGOs. The pilot project of seaweed farming is a case in the point; the pilot project was an example of the latter case. Since the target community of Pungudutivu East has been receiving assistance from Sewalanka Foundation since several years ago. This kind of consideration must be needed for community-based aquaculture development for the time being. Once the aquaculture business is succeeded with target species, full scale of outreach of aquaculture project could be carried out with coastal communities.

### **(3) Consensus of fishing rule for new technique**

FAD is quite a new technology for fishermen in Jaffna District, and the lack of rule concerning how to use it caused the loss of the installed FADs within three months after the installation. This is a good example that even when a suitable and potential technique for the area is adopted, it is not always easy to disseminate the technology unless social consensus is formed among stakeholders for the use of technology. As far as FAD is concerned, repeated and patient discussion will be required to build consensus for a rule of its use, as observed in Indonesia where fishermen must pay the charge to owners of a FAD whenever they use it. This kind of effort is basically the same as one for the formulation of a fisheries resources management system as discussed above in (1).

#### (4) Social inclusion

Among a total of 1,751 participants of trainings in fisheries sector, 456 new IDPs (26%), 92 old IDPs (5%) and 277 WHFs (16%) were included. A total of 825 socially vulnerable people received training under the five pilot projects in the fisheries sector, which is equivalent to 47% of the total number of recipients of the trainings. Above all, the pilot project of Construction of Fish Auction Halls (FC-5) accounts for 96% of the total number of socially vulnerable people. This is because the pilot project included a component of promotion for social inclusion in the fishing communities through promoting linkage between conflict affected widows and the FCSes by fisheries related livelihood measures and an institutional capacity development. Unlike agriculture, fishing can provide fast cash income, encouraging more returnees and IDPs to engage in fishing actively. Relatively low input required for basic instruments such as fishing nets eases their entry into fishing. FCSes plan to employ the socially vulnerable family members for weighing fish and cleaning the fish auction halls as a mutual assistant.

### **8.6.3 Summary of Lessons Learned from Pilot Projects for Women in Community**

The foremost constraint that the pilot projects for Women in Community faced was the limited implementation time-frame. The Team had less than four months between the commencement of the projects and the evaluation. Some of the projects had several components, such as construction, equipment procurement, and technical and capacity-building training. Most of the pilot projects have just finished and their outcomes are beginning to emerge now. Therefore, the lessons learned have been drawn mainly from the planning and implementation stages.

#### (1) Overall

All the pilot projects for Women in Community are expected to finish successfully. All of them are expected to complete their planned activities by the end of August. Most of them achieved the pilot project objectives of empowering WRDSs by generating income for their members and their societies. Most of the WRDSs enhanced their institutional capacity, management capacity, production capacity and sustainability, although variations were observed. One of the most crucial outcomes was that the members recognized the importance of the societies' role in community and leadership. On the other hand, it was difficult for the Team to confirm degrees of income generation for beneficiaries because most of them have yet to start selling their products.

#### (2) Capacity Development of the WRDS

The WRDSs all achieved their goals of enhancing techniques, widening the varieties of products, and raising the quality of the products. Capacity development was successful in many ways: for instance, by making members more active, encouraging proper record keeping, enhancing their social roles, establishing links with government officers and other agencies, and extending leadership. The CC-1 Velanai East WRDS, for instance, has built strong networks among government officers, relevant agencies, and resource persons through the support of the implementation agency (JSAC).

### (3) Social Inclusion

Compared with their previous participation in WRDS activities, more socially vulnerable people were engaged in the pilot project. Among a total of 1,476 participants of trainings in women's activities, 124 new IDPs (8%), 20 old IDPs (1%) and 522 WHFs (35%) were included. A total of 666 socially vulnerable people received training under the five pilot projects in women's projects, which is equivalent to 45% of the total number of recipients of the trainings. The participation of WHFs marked the highest among other sectors because Widow's Society (CC-5) was designed especially to target WHFs. The poultry (CC-4) projects also involved many WHFs through proper screening of beneficiaries. Social inclusion was effectively promoted by society members, government officers and other relevant stakeholders. At the time of beneficiary selection, the implementing agency, GN, RDO, and the Team facilitated the transparent criteria to place priority to socially vulnerable people. The CC-2 Siruppidy WRDS tried to maintain the "family details" records of their members, which turned committee members' attention towards their members to provide suitable support. This technique can be introduced to other societies as a means of social inclusion.

### (4) Government Officers

Many in the GS, RDO, and WDO were involved in the pilot projects. Most of them had visited the WRDSs once a month or less before the pilot projects, but their monitoring has now become more frequent. Beneficiary selection was conducted in a transparent fashion and involved appropriate government officers. This helped the projects succeed by minimizing the risk of conflict within the communities.

### (5) Contributing Factors to the Success of the Project Implementation

The selection of committed implementing agencies contributed in the success of the project implementation. The implementing agencies involved necessary stakeholders and coordinated properly among them. The suitable beneficiary selection enhanced the motivation of the members. (6) Planning of pilot projects

The selection of strongly performing WRDSs in the DS Division was the suitable strategy for creating role models in the areas quickly; however, the capacities of committee members should be given more importance during selection. The CC-5 Tharaka Widow's Society was affected by the domineering behavior of its leader, and the society needed to change its dependent attitudes. For longer-term projects, more time and efforts should be put on social mobilization from the outset. All the WRDSs found financial sustainability challenging, even though some of them have set up a system for gaining a regular income.

## **8.6.4 Summary of Lessons Learned from Infrastructure Rehabilitation Component**

### (1) Limitation of Resources for Construction Works in Jaffna

The construction works under IRC faced difficulties of use of local resources although PDP-Jaffna aimed to utilise local construction labours and materials for the purpose of socio-economic impact to the local

communities.

Considering limited duration of the construction works under PDP Jaffna, qualified construction company and workers were needed. As the result of bidding, a Colombo-based and top ranked contractor was selected. Generally, construction companies in Jaffna do not have sufficient experience of construction works due to the prolonged conflict, although they have some geographical advantages in Jaffna comparing with construction companies from the south. Since construction works have been discouraged for many years during the conflict, there is limited number of qualified construction labours available in Jaffna. Against this background, the Contractor of IRC needed to employ skilled labours from the south after they failed to hire labours from local communities.

The labours from the south, however, are not familiar with extremely hot climate of Jaffna, and they could not perform so efficiently on the construction sites. From this practice experienced, it is understood that qualified local construction workers are needed for efficient reconstruction and development of Jaffna District and employment generation for local people. When a donor subcontracts construction works to a contractor from the south, it may have to be considered that not only recommendation of employment of local labours but also a training component of local labours with longer construction period are included in a contract agreement. Technical transfer from experienced construction companies from the south to local labours is very important to build the capacity of local people. This kind of technical exchange between them may contribute to reconciliation process as well.

Availability of construction materials were a constraint in the construction industry of Jaffna. Limestone is one of major construction materials which is locally available and often used in Jaffna. In general, however, granite stone is better in quality and cheaper for building works in Sri Lanka though granite stone becomes more expensive than limestone in Jaffna, with an additional cost for transportation from stone quarry. On the other hand, mining of limestone in Jaffna tends to risk negative impact to underground water because it is easy to reach underground water containing high salinity, which is laid under the limestone layer. In order to mitigate such a risk, the promotion of the use of granite stone for medium to large scale building works should be considered by securing transportation budget in the future.

## (2) Risks in the Post-conflict Reconstruction

During the conflict and displacement, many of official documents including drawings of public facilities were lost in Jaffna. PDP Jaffna faced difficulties of confirming scale and structure of existing and damaged facilities in the design stage. Due to the lack of such technical information, it was necessary to modify facility designs, which could not be specified in the design stage, after the commencement of the construction works. Flexible design change would be needed, if the change did not hamper project objective and essential functions of the facility.

The resettlement process affected to the construction works. Power supply plan for the CCB coconut

nursery had been changed due to the urgent needs of other resettlement areas, so that the construction works at the coconut nursery had to be implemented without electric power. Then, PDP Jaffna requested CCB to procure a generator for the implementation of construction works as well as the backup power until the power is supplied by CEB. It is necessary to develop construction budget with contingency for unexpected risks in the post-conflict environment, as well as careful confirmation to relevant authorities concerned.

Safety management is essential for the construction works. PDP Jaffna conducted the landmine awareness and safety management workshop to the contractor considering explosive remnants of conflict in Jaffna and experience of the QIPP. The workshop and safety measures of the contractors were effective in protecting construction workers and neighbours from accidents and explosion of landmine and UXO, so that IRC faced neither accident nor complaint from local population.

### (3) Recommendation for Improving Construction Quality in Jaffna

Developing the local construction industry will be crucial for rehabilitation and development of Jaffna in medium and long term. Unfortunately, the IRC was not able to subcontract local contractors, considering their qualification. In addition to the affirmative grading of contractors in the North by ICTAD, the GOSL needs to take actions to enhance their construction capacity in the fields of law and regulations, techniques and construction management concerning civil engineering and architecture. Also, the contractors should be given opportunities of construction works to learn and practice construction technology; the GOSL and donors may have to design infrastructure projects in the North with local contractors and a special training component for them with a longer construction period. The GOSL and donors should consider recommending the joint venture between local contractors and contractors from the south so that technical exchange between them can be facilitated.



**Chapter 9**  
**Road Maps toward 2020**



## **Chapter 9 Road Maps toward 2020**

### **9.1 Process of Road Map Making**

Chapter 9 correlates with Chapter 5, where the process of making Road Maps originates in its basic policy implications and sector planning. The goal of Chapter 9 is to further develop the basic analysis and planning of Road Map production to the elevated level of a complete set of Road Maps.

One of the Team's ultimate tasks in this project is to draft Road Maps for the agriculture sector, fisheries sector, and for community development in Jaffna. Considering the Jaffna's Grand Vision 2020, which is discussed in Chapter 5, these Road Maps have been designed to show the required and feasible ways of developing these sectors by 2020, and even beyond. This report contains the draft Road Maps, reflecting the consensus created through discussions with a wide range of participants at the First Development Workshop in Jaffna on 19 February 2011 and the Second Development Workshops in July 2011. The next section, 9.2, will give an overview of these Workshops.

The process of making the Road Maps can be conceptualized as a sequence of the following 11 continuous steps. However, while the formation of the agriculture and fisheries sectors' Road Maps have rigorously followed this process, the community development category, considered to be a social issue with different social implications, did not strictly follow the process.

1. Thoroughly analyzing the present status of the sectors in Jaffna District.
2. Identifying major production categories in each sector.
3. Describing the ideal status of each of the identified categories in contrast to the present status.
4. Listing important actions to ensure a seamless transition from the present status to the ideal status.
5. Sorting out and placing the listed actions in a developmental framework.
6. Relocating the listed actions in a more realistic time line.
7. Selecting the most critical actions to realize the ideal status.
8. Reviewing the above process at the First Development Workshop in Jaffna.
9. Finalizing the Road Maps at the Second Development Workshop in Jaffna.
10. Programming development by converging critical actions.
11. Outlining concrete projects in the programmes.

Step	Activity	Outcome	Relevant Chapter(s)
1	Analyzing the present status	Report	Chapter 2,3, and 4
2	Identifying production categories	Report	Chapter 3 and 4
3	Describing ideal status	Tables for strategy, targets and goals. Tables for indicators for development	Chapter 5
4	Listing important actions	Objective analysis	Chapter 5
5	Sorting out the actions in time line	Framework for development	Chapter 9
6	Relocating the actions in realistic time line	The first draft of Road Maps	Chapter 9
7	Selecting critical actions	The second draft of Road Maps	Chapter 9
8	The First Development Workshop	Road Maps	Chapter 9
9	The Second Development Workshop	Revised Road Maps	Chapter 9
10	Programming	Programs	Chapter 9
11	Outlining projects	Projects	Chapter 8 and 9

**Figure 9- 1: 11 steps for Road Map Making**

The sections below develop specific tasks to be accomplished within each of these 11 steps.

1. Thoroughly analyzing the present status of the sectors in Jaffna District.

This is a series of activities the Team conducted to gather, integrate, analyze, and summarize relevant information and findings concerning the sectors. The Team has been undertaking these activities since the inception of PDP Jaffna in April 2010. Chapter 3 presents the outcome of this process for the agriculture sector, and Chapter 4 does the same for the fisheries sector. The present community development effort is presented in Chapter 2. To review the existing development plans is another goal required in this step. Despite some shortcomings, the existing plans provide salient information about development needs and existing means and measures for development.<sup>1</sup>

<sup>1</sup> As discussed in Chapter 2, the Joint Plan for Assistance Northern Province 2011 provides an insightful vision of restoration and development in Northern Province. The assessment of future needs by this report prepares a common ground for line agencies of the Government of Sri Lanka (GOSL) and donors, as well as non-government agencies (NGOs).

2. Identifying major production categories in each sector.

In Chapter 5, we discussed “Jaffna’s Grand Vision 2020,” aimed at clarifying the economic, and to some extent social, undertones inside and outside of Jaffna for the next decade. It was noted that this forward-looking “Grand Vision 2020” would have a broad effect on all sectors and stakeholders in Jaffna, including agriculture, fisheries, and community development. Chapter 5 also includes problem analysis charts of the two sectors; the problem analysis derived from the charts schematizes what the Team considers to be sector-wise issues and challenges. Unlike the Grand Vision, the problem analysis essentially considers challenges from within the two sectors. The two sectors’ problem analysis constitutes the respective commencement points for implementing the agriculture and fisheries development plans. The Team concluded that an agriculture sector development strategy should be put in place for each of its four production categories.<sup>2</sup> In the fisheries sector, three production categories are proposed.<sup>3</sup>

3. Describing the ideal status of each of the identified categories compared to the present status.

One of the essential requirements in formulating a development strategy is to explicitly describe the ideal status in terms of area, sector, policy, or any other matters that are part of the planning strategy. For each of the major categories discussed above, it is necessary to indicate what is supposed to be the ideal status, compared, as opposed to the present status. This step is required in order to avoid a piecemeal collection of seemingly needed actions. When the ideal status is described by the category in Chapter 5, four different future time spans are applied; they are as follows: immediate (two years from now), short-term (within approximately five to six years from now), mid-term (within ten years from now), and long-term (over ten years). The ideal status in two years is naturally expected to be very different from an ideal status in ten years.

4. Listing important actions to ensure evolution from the present status to the ideal status.

Next, a listing of all needed and feasible major actions is required to ensure the effective progress from the present status to the ideal status. This must also be implemented in each category. An important clue for effectively handling this step is to envision a pyramid structure, consisting of a group of required actions, all of them showing proportional, interconnected, or hierarchal relationships, from bottom to top, in order to achieve the ideal status. A wide range of actions necessary for achieving the ideal status are proposed in the following Sections of this Chapter.

5. Sorting out and placing the listed actions into a developmental framework.

This is another step required to process the identified actions subsequent to Step 4. This chapter also contains examples of developmental frameworks. Reviewing these segments of the framework, one can easily understand that the columns of the frameworks correspond to the categories, and each column is further divided into three by time scale: immediate (defined as one or two years from

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<sup>2</sup> They are (i) vegetables and fruits production in high land, (ii) lowland paddy production, (iii) sandy soil agriculture on outlying islands and coastal areas, and (iv) livestock production.

<sup>3</sup> They are (i) sustainable coastal fisheries, (ii) offshore fisheries development, and (iii) aquaculture development.

present), short-term (about five years from present), and mid-term (about 10 years from present). The rows of the framework correspond to the types of interventions. For example, some actions are designed to raise productivity, while other actions are formulated to improve the organizational capacities of CBOs or public service providers. By placing the listed actions in different rows in the framework, one can see, at first glance, that actions, which may appear to be at random and isolated, are actually interrelated and intertwined.

6. Relocating the listed actions to a more realistic time line.

Next, the process can move forward by transferring the same required actions into a more realistic time line table. One may feel that this is a duplication of the work performed in Step 5, but it should be noted that the framework used in Step 5 can only demonstrate when these actions should begin, not how long they will reasonably take to attain its objective. The key here is practicality in implementing individual actions in the real world. In addition, when attempting to demonstrate the length of time a certain action takes in the same developmental framework, the framework becomes very complicated and unfriendly to readers of the data. Separate time line tables could be prepared; examples of the time line tables are also found in this chapter.

7. Selecting the most critical actions for realizing the ideal status.

Practically speaking, to select only critical actions out of many theoretically possible and desirable actions is the most important process in planning. There are always some critical actions that are, by definition, not only indispensable, as opposed to desirable, given the limited resources available for taking actions. Since there is no black-and-white criterion for selecting what are supposed to be critical actions, the insights based on real-world experience as well as rich knowledge taken from local events, are often required.

8. Reviewing the above process at the First Development Workshop in Jaffna District

The First Development Workshop in Jaffna reviewed in a participatory manner the processes noted from Steps 1 to 7. The Team prepared the draft frameworks, as well as the draft time line tables, as a set of references for discussion at the Workshop.

9. Finalizing Road Maps at the Second Development Workshop in Jaffna District

At the Second Development Workshop in Jaffna, PDP Jaffna provided another valuable opportunity to review and rethink all the above-discussed processes, including changes suggested at the First Development Workshop. The results of the Second Development Workshop were reflected in finalizing the Road Maps.

10. Programming development by converging critical actions.

The next step in the process was the formulation of programmes for each category. This was done by linking selected critical actions within a category into a structure of intervention. This is a step called

“programming,” which also requires experience. A mechanical application of any ready-made planning methods might not be substituted.

#### 11. Outlining concrete projects in the programmes.

The last step is to specify concrete project ideas and create a programme with them; the projects should be appropriately placed within the programme. This should be followed by the clarification of the individual projects’ specifications. The specific elements of the projects and the programmes to be clarified include budget, term, target group, implementing organization, component, activity, and goal(s) to be achieved. These details are essential for the government and donors to make an informed decision regarding the viability of implementing the project. PDP Jaffna has implemented a number of the pilot projects, and it was imperative to obtain feedback and consciously consider “lessons learned” from their performance. (Please see Chapter 8 for the monitoring and evaluation of the individual pilot projects.)

### **9.2 Development Workshops in Jaffna**

The First Development Workshop was held on 19 February 2011, in Sornaambihai Hall, Jaffna City, with 145 participants from a wide range of institutions, including private and governmental, academic and business, national and foreign. They collectively pored over the formulation process of the draft Road Maps presented by the Team, examined the development needs rationale, and checked the plausibility of predicted courses of actions in the three sectors.

After keynote speeches by the Jaffna GA, the JICA representative, et al., the participants split into seven discussion sessions (four sessions for agriculture, one for fisheries, one for the manufacturing industry, and one for community development) to participate in individual discussions. The manufacturing industry discussion session was chaired by Dr. Namal Samarakoon from UNIDO. Many ideas and opinions from the Workshop were added to the framework and time line tables, with some changes suggested. Subsequently, the suggestions from the Workshop discussions were reflected in the draft Road Maps.

The Second Development Workshop was held on a series of separate occasions in July 2011, with the basic objective of finalizing the Road Maps. Fewer participants were invited than the First Workshop; regardless, prominent sector specialists, important officials, and businessmen gathered for the meeting. As a result, the Workshops produced constructive discussions, which were eventually reflected by the Team in the Road Maps. (The photos of these Development Workshops are contained in the photo collection on page P-1, and a copy of the newspaper article reporting the First Workshop is available in the Appendix 1-10.)

## **9.3 Road Map for Highland Vegetables and Fruit Production**

### **9.3.1 Important Actions and Development Framework**

This section explains the Road Map for highland vegetable and fruit production, the first of the four categories in the agriculture sector. First, actions required for achieving a development framework discussed in Chapter 5 is described. Table 9-1 shows important steps and terms related to this category.

To achieve the sector targets discussed in Chapter 5, two additional requirements—income improvements and institutional development - have been included after an analysis of developmental potential and available resources. Income improvements can be achieved through such measures as 1) a stable supply of inputs, 2) sustainable management of resources, 3) improvement in productivity, 4) improvements in marketing, and 5) improvements to infrastructure. Meanwhile, institutional development includes such aspects as 1) strengthening agricultural CBOs and 2) strengthening public service providers.

### **9.3.2 Required Actions**

#### (1) Required actions for income improvements

##### 1. Stable supply of inputs

Supply of quality seeds and seedlings is a priority issue for vegetable and fruit production. Mushroom production, a recently introduced crop, is facing difficulties in getting spawn. IDPs and returnees will need assistance with their initial inputs for at least a couple of more years. Some form of subsidized farm inputs is necessary to help small farmers. In the long run, genetic resources should be explored. The following concrete actions are required for stable supply of input:

- Reinforce the supply of quality, locally produced vegetable seed, onion seed bulbs, and fruit seedlings
- Establish a stable supply system for mushroom spawn
- Provide initial inputs on a grant basis for IDPs and returnees
- Provide subsidized farm inputs, such as fertilizer, tools, and machineries
- Implement a study on germ plasma

##### 2. Sustainable management of resources

Chemical residues in food, salinity, and groundwater pollution are the main environmental concerns in Jaffna. The use of fertilizers and water exploitation are both high since vegetable and fruit production is intensively practiced in the highlands; the scarce groundwater becomes polluted and saline. Farmers tend to apply agrochemicals improperly, and thus chemical residues are found in their products. Over-exploitation of water is also causing water shortages during the dry season. The following concrete actions are required to achieve sustainable management of resources:

- Provide education to farmers on the proper use of fertilizer and agrochemicals
- Establish and disseminate water-saving agriculture models
- Promote organic manure application
- Monitor water pollution and soil salinity

### 3. Improvement in productivity

Introduction of new technology, promotion of new crops (including mushrooms), improvements in cultivation practices for Jaffna specialties, mammalian pest control, and the minimizing of transporting loss should be implemented immediately. Improvements in post-harvest technology should be pursued no later than three years from present. To support IDPs and WHFs, the promotion of home gardens is recommended after their emergency assistance is exhausted. The following concrete activities are required for improvement in productivity:

- Introduce new cultivation technologies experimentally
- Promote mushroom cultivation
- Disseminate improved cultivation technologies for Jaffna specialties (e.g., training and the introduction of new varieties)
- Formulate mammalian pest control projects
- Minimize transport losses in fruits and vegetables, especially bananas
- Improve post-harvest technology for fruits and vegetables
- Promote home gardens for IDPs and WHFs

### 4. Improvements in marketing

Sales of Jaffna specialties such as grape, banana, and mango should be promoted to recover pre-conflict production levels, over which fruit processing will be the next challenge. Market information systems and cold chains should also be established (or improved) immediately afterwards. In the next decade, tourist fruit farms are expected to appear. The following concrete actions are required for improvements in marketing:

- Promote Jaffna specialties such as grape, banana, and mango
- Promote processed fruit products
- Improve market information systems for farmers
- Establish cold chains for fruits and vegetables
- Establish tourist fruits farms

### 5. Improvements to infrastructure

Agro-wells, reservoirs, and canals need to be further renovated, and abandoned areas should be rehabilitated in the immediate term. Rural roads should be improved. The establishment of a central wholesale market and cold storages are expected in the near future. In essence, the followings concrete actions are required for improvements to infrastructure:

- Renovate agro-wells, reservoirs, and canals
- Rehabilitate abandoned areas
- Implement a rural road improvement project
- Conduct a feasibility study on the construction of a central wholesale market
- Construct a central wholesale market
- Establish cold storages for vegetables

(2) Required actions for institutional development

1. Strengthening organizations for agricultural population

The FOs in the highlands are expected to become more involved with vegetable and fruit production. Crop-based FSs such as the Fruit Producers and Sales Cooperative and the Mushroom Growers' Society are still young and need support for strengthening. The involvement of IDPs and returnees in these FSs should be assured. The following concrete actions are required to strengthen organizations for the agricultural population:

- Conduct an inventory study on innovative FO activities
- Work out an innovative FO model
- Implement a model FO project
- Implement full-scale restructuring of FOs
- Strengthen crop-based FSs
- Encourage IDPs and returnees to join FSs
- Assure vulnerable groups' membership in FSs
- Expand FSs' business activities

2. Strengthening public service providers

The extension service is the most important public service in this category. Reliable statistical information is essential for practical planning. Research is also essential for future development. The following concrete activities are required to strengthen public service providers:

- Strengthen agri-extension service capacity
- Modernize DATC
- Improve the statistical information system
- Strengthen agri-extension at the AI range level
- Establish a cyber extension network for the agricultural sector
- Modernize the research facilities of DOA (Research) and UOJ
- Strengthen the Faculty of Agriculture, UOJ

### **9.3.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be reallocated in realistic timelines. Tables 9-2 shows the proposed timelines for the actions in this category.



**Table 9- 1: Framework for Agriculture Development in Jaffna District 1: Vegetable and Fruit Production in Highland**

Category		Vegetable and Fruit Production in Highland			
Strategy		Recovering the production of the local specialties such as mango, onion and banana to pre-conflict level and expanding the offshore market			
Issues to be solved		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Income Improvements	Stable supply of inputs	<ul style="list-style-type: none"> <li>Reinforcement of supplying locally produced quality vegetable seed, onion seed bulb and fruit seedlings <b>AC-1 Strengthening of SEEDCO</b></li> <li>Establishment of stable supply system of mushroom spawn <b>AC-4 Establishment of mushroom centre</b></li> <li>Provision of initial input on grant basis for IDPs and returnees</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	<ul style="list-style-type: none"> <li>Reinforcement of supplying locally produced quality vegetable seed and fruit seedlings including virus-free seedlings</li> <li>Establishment of stable supply system of mushroom spawn</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of study on germ plasm</li> </ul>	
	Sustainable management of resources	<ul style="list-style-type: none"> <li>Education to farmers on judicial use of fertilizer and agro. chemicals <b>AC-2 Strengthening extension service</b></li> <li>Establishment of water saving agriculture models</li> <li>Promotion of organic manure application</li> <li>Monitoring of water pollution and salinity of soil</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of judicial use of fertilizer and agro. chemicals</li> <li>Dissemination of water saving agriculture</li> <li>Promotion of organic manure application</li> <li>Monitoring of water pollution and salinity of soil</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of water saving agriculture</li> <li>Monitoring of water pollution and salinity of soil</li> </ul>	
	Improvement in productivity	<ul style="list-style-type: none"> <li>Experimental introduction of new cultivation technology</li> <li>Promotion of mushroom cultivation <b>AC-4 Establishment of mushroom centre</b></li> <li>Dissemination of improved cultivation technology of Jaffna specialties (training, introduce new variety) <b>AC-3 Strengthening of Mango society</b></li> <li>Formulation of mammalian pest control project</li> <li>Minimization of transporting loss of fruits and vegetables, especially Banana</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of new cultivation technology</li> <li>Promotion of mushroom cultivation</li> <li>Dissemination of improved cultivation technology of Jaffna specialties (training, introduce new variety)</li> <li>Implementation of mammalian pest control project</li> <li>Improvement of post harvest technology of fruits and vegetables</li> <li>Promotion of home gardens for IDPs and WHFs</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of new cultivation technology</li> <li>Improvement of cultivation technology of Jaffna brand vegetables and fruits</li> <li>Introduction of floriculture</li> </ul>	
	Improvement in marketing	<ul style="list-style-type: none"> <li>Promotion of Jaffna specialties such as grape, banana, mango (Establishment of fruit collection and sales centers)</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of Jaffna specialties such as grape, banana, mango (Strengthening fruits collection and sales centre)</li> <li>Promotion of processed fruits product</li> <li>Improvement of market information system for farmers</li> <li>Establishment of cold chain for fruits and vegetables.</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of tourist fruits farms</li> </ul>	
	Improvement to infrastructure	<ul style="list-style-type: none"> <li>Renovation of agro wells, reservoirs and canals</li> <li>Rehabilitation of abandoned area</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> <li>Feasibility study on central wholesale market</li> <li>Establishment of central wholesale market</li> <li>Establishment of cold storage for vegetable</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> <li>Establishment of central wholesale market</li> </ul>	
Institutional development	Strengthening organizations for agricultural population	FO	<ul style="list-style-type: none"> <li>Inventory study on innovative FO's activities</li> <li>Establishment of innovative FO model</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of model FO project</li> </ul>	<ul style="list-style-type: none"> <li>Full-scale restructuring of FOs</li> </ul>
		FS, LIBCO	<ul style="list-style-type: none"> <li>Strengthening crop-based FSs <b>AC-3 Strengthening Mango society, AC-4 Establishing mushroom centre</b></li> <li>Encouragement to IDPs and returnees to join FSs</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening crop based FSs</li> <li>Assurance of the vulnerable groups' membership with FSs</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of FS's business activities</li> </ul>
	Strengthening public service provider	District level	<ul style="list-style-type: none"> <li>Strengthening agri. extension service capacity <b>AC-2 Strengthening extension service</b></li> </ul>	<ul style="list-style-type: none"> <li>Modernization of District Agriculture Training Center</li> <li>Improvement of statistical information system</li> <li>Strengthening agri. extension at AI range level</li> <li>Establishment of cyber extension network of agriculture sector</li> </ul>	<ul style="list-style-type: none"> <li>Modernization of research facility of DOA (Research) and/or UOJ</li> </ul>
Provincial level			<ul style="list-style-type: none"> <li>Strengthening of Faculty of Agriculture / UOJ</li> </ul>		

**Table 9- 2: Development Road Map 1 Vegetable and Fruits Production in Highland**

Pilot Project    
  Project    
  Critical Action

As of 14th July 2011

Goal	Objective	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020																																																																														
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
<b>I. Income Improvements</b>																																																																																																											
1. Stable supply of Inputs	Sub-objective	Reinforcement of supplying locally produced quality vegetable seed and fruit seedlings including virus free seedlings (DOA, SEEDCO)																								Implementation of study on germ plasm (UOJ, DOA)																																																																																	
		AC-1		Establishment of stable supply system of mushroom spawn (DOA)																																																																																																							
		AC-4		Provision of initial input for returnees (DOA, NGOs)																																																																																																							
																										Provision of subsidized farm input (DAD, DOA, NGOs)																																																																																	
2. Sustainable management of resources	Sub-objective	AC-2		Provision of education to farmers on judicious use of fertilizer and agro chemicals (DOA)												Dissemination of judicious use of fertilizer and agro chemicals (DOA, UOJ, DAD)																																																																																											
		Establishment of water saving agriculture models (DOA, UOJ)																																																																																																									
		Dissemination of water saving agriculture (DOA, DOI, NWSDB, UOJ)																																																																																																									
		Promotion of organic manure application (DOA, UOJ, Local Gov, NGOs)																																																																																																									
																								Implementation of monitoring water pollution and salinity of soil (DOA, NWSDB, UOJ, HD, Water committee)																																																																																			
3. Improvement in productivity	Sub-objective	Experimental introduction of new cultivation technology (DOA, UOJ)																																																																																																									
		Introduction of new cultivation technology (DOA)																								Dissemination of new cultivation technology (DOA)																																																																																	
		Improvement of post-harvest technology of fruits and vegetables (DOA, UOJ)																																																																																																									
		AC-4		Promotion of mushroom cultivation (DOA)																																																																																																							
		AC-3		Dissemination of improved cultivation technology for Jaffna specialties such as Grape, Banana, Mango (DOA)																																																																																																							
																								Improvement of cultivation technology of Jaffna brand vegetables and fruits (DOA)																																																																																			
																								Formulation of mammalian pests control project (DOA, DAD, Local Gov.)																																																																																			
																								Implementation of mammalian pests control project (DOA)																																																																																			
																								Promotion of home gardens for IDPs and WHFs (DOA, CCB, DAD)																																																																																			
																								Introduction of floriculture (DOA, UOJ)																																																																																			
4. Improvement in Marketing	Sub-objective	Minimization of transportation loss of vegetables and fruits, especially banana (DOA, UOJ)																																																																																																									
		Promotion of Jaffna specialties such as Grape, Banana, Mango (DOA)																																																																																																									
		Promotion of processed fruits product (DOA, IDB, PDB, UOJ)																																																																																																									
		Improvement of market information system for farmers (DOA, UOJ, Local gov., Private)																																																																																																									
																								Establishment of cold chain for fruits and vegetables (DOA)																																																																																			
5. Improvement to Infrastructure	Sub-objective	QIPP		Renovation of agro wells, reservoirs and canals (DAD, DOI, CCB)												Implementation of rural road improvement project (DAD, Pradeshiya Sabha, Local gov)																																																																																											
		Rehabilitation of abandoned area (DAD, DOI, NGOs)																																																																																																									
		Feasibility study on central wholesale market (Municipality, DOA)																								Establishment of cold storages (DOA, IAs.)																																																																																	
																								Establishment of central wholesale market (Municipality, DOA)																																																																																			
<b>II Institutional Development</b>																																																																																																											
1. Strengthening organizations for agricultural population																																																																																																											
1) Farmers' Organization	Sub-objective	Inventory study on innovative FO's activates (DAD)												Implementation of model FO project (DAD)												Full-scale restructuring of FO (DAD)																																																																																	
		Establishment of innovative FO model (DAD)																																																																																																									
2) Producers Cooperative Societies (FS)	Sub-objective	AC-3		Strengthening of crop based FSs (DOA, DCD)																																																																																																							
		AC-4		Encouragement to IDPs and returnees to join FSs (DOA,)												Assurance of the vulnerable groups' membership with FSs (DOA)												Expansion of FSs' business activities (DOA, DCD)																																																																															
2. Strengthening public service providers																																																																																																											
1) District level	Sub-objective	AC-2		Modernization of District Agriculture Training Center (DOA)												Strengthening agriculture extension service capacity (DOA)												Modernize Research facility of ARS and /or UOJ (DOA, UOJ)																																																																															
		Improvement of statistical information system (DOA, DAD, UOJ)																																																																																																									
		Establishment of cyber extension network of agriculture sector (DOA, UOJ, DAPH, CCB, PDB, DAD)																																																																																																									
2) Provincial level	Sub-objective	Strengthening Faculty of Agriculture / UOJ (UOJ)																																																																																																									

### 9.3.4 Critical Actions

Among the required actions in the development framework, the Second Workshop voted the following as being the most critical actions for achieving our goals:

(Note: numbers in parentheses indicate the number of votes given, out of 8)

1. Strengthen agri-extension service capacity (8)
2. a. Formulate a mammalian pest control project (6)  
b. Establish a stable supply system for mushroom spawn (6)  
(in both the immediate and short terms)
3. a. Minimize transportation losses in fruits and vegetables (5)  
b. Educate farmers in the proper use of fertilizers and agrochemicals (5)
4. a. Increase the supply of quality locally produced vegetable seed, onion seed bulbs, and fruit seedlings (4)  
b. Supply initial inputs on a grant basis to IDPs and returnees (4)  
c. Promote Jaffna specialties (4)
5. a. Establish water-saving agriculture models (3)  
b. Experiment with new crops (3)  
c. Promote organic manure application (3)  
d. Rehabilitate abandoned areas (3)

### 9.3.5 Programmes and Projects for Critical Actions

Through discussions we had with related agencies and stakeholders during the two Development Workshops, we have formulated programmes and projects for those critical actions.

#### The Highland Vegetable and Fruit Production Development Programme

The Highland Vegetable and Fruit Production Development Programme is composed of the following five projects: 1) Supporting IDPs and Returnees, 2) Strengthening the Agri-Extension Service Capacity, 3) Providing Environmental Education, 4) Promoting Jaffna Specialties, and 5) Promoting New Crops (e.g., mushrooms). The implementing agencies for these projects should be DOA. Basically government budget should be allocated to implement these projects. However, in case the government fund cannot meet the required cost, international assistance should be sought after. Technical assistance from international organizations should be looked for in case the capacity of DOA is inadequate to implement the programme.

Contents of five projects in brief are as follows;

- 1) Supporting IDPs and Returnees: The activities of this project would include, provision of initial inputs to IDPs and returnees and encouragement to IDPs and returnees to join FSs and FOs. DOA and DAD should jointly take responsibility to implement this project with the support of

international organizations and/or local NGOs. This project would cover the category of lowland paddy production as well.

- 2) Strengthening the Agri-Extension Service Capacity: This is a follow up project for the pilot project AC-2. The activities would include provision of training to AIs, modernization of DATC, establishment of cyber extension network. DOA would be an implementing agency with the support of international organizations. This project would cover the category of lowland paddy production as well.
- 3) Providing Environmental Education: The activities of this project would include provision of training sessions on proper use of fertilizer and agrochemicals for farmers, provision of education programme on ground water management to farmers and students, and implementation of environmental campaigns. DOA would be an implementing agency with the support of international organizations and/or local NGOs. This project would cover the category of lowland paddy production as well.
- 4) Promoting Jaffna Specialties: The activities of this project would include provision of technical training to farmers, provision of farming materials and machinery to model farmers or societies, establishment of sales outlets, strengthening growers' societies, facilitating farmers' access to financial institutions, conducting market research, and implementing a project for mammalian pest control. DOA would be an implementing agency with the support of international organizations and/or local NGOs.
- 5) Promoting New Crops: This is a follow up project for the pilot project AC-4. The activities would include management of mushroom center, strengthening of growers' society, provision of training to farmers, provision of marketing support. DOA would be responsible to implement the project.

Details on the programme are shown in Table 9-3.

**Table 9- 3: The Highland Vegetables and Fruits Production Development Programme**

No.	Programme/ Project title	Location	Project description	Duration (period)	Implementing agency	Estimated cost (LKR thousands)
1	Supporting IDPs and returnees	Jaffna District	- Provision of initial inputs to IDPs and returnees - Encouragement to IDPs and returnees to join FSs and FOs	2 years (2011–2012)	DOA and DAD	100,000 (5000 household × LKR 20,000)
2	Strengthening agri-extension service capacity	Jaffna District	- Provision of training to AIs - Modernization of DATC - Establishment of cyber extension network	5 years (2012–2016)	DOA	300,000 (DATC: LKR 200,000) (Others: LKR 20,000 x 5 years)
3	Providing environmental education	Jaffna District	- Provision of training sessions on proper use of fertilizer and agrochemicals for farmers - Provision of education programme on ground water management to farmers and students - Implementation of campaigns	2 years (2012–2013)	DOA	16,000 (LKR 8,000 x 2 years)
4	Promoting Jaffna specialties	Jaffna District	- Provision of technical training to farmers - Provision of farming materials and machinery to model farmers or societies - Establishment of sales outlets - Strengthening growers' societies - Facilitating farmers' access to financial institutions - Conducting market research - Implementing a project for mammalian pest control	5 years (2011–2016)	DOA	200,000 (LKR 40,000 x 5 years)
5	Promoting new crops (e.g., mushrooms)	Jaffna District	- Management of mushroom center - Strengthening of growers' society - Provision of training to farmers - Provision of marketing support	4 years (2011–2015)	DOA	20,000 (LKR 5,000 x 4 years)
Total Estimated Cost						636,000

### 9.3.6 Recommendation for Implementation

#### (1) Capacity development of DOA officials

DOA will be a major implementing agency of this programme. At the moment, capability of DOA is fairly limited since the many vacancies of official position are not filled and present officials haven't had much chance to be trained due to the prolonged conflict. For the implementation of the projects proposed here, GOSL should employ new officers as quickly as possible, in addition to develop the capacity of the existing officers and consider measures to keep their motivation high.

#### (2) Coordination with related agencies

Though DOA will be a major implementing agency of this programme, some of their activities are interlinked and sometimes even overlapped with DAD, DCD and IDB. Before the implementation of the

proposed projects, DOA and supporting agency should share project information with relevant institutions and coordinate project activities with them.

(3) Social Inclusion

It is recommended to compensate the vulnerable peoples' earning when training programmes particularly target them.

(4) Environmental concern

When applying new agricultural technology, the implementing agency should carefully assess its impact to ground water.

## **9.4 Road Map for Lowland Paddy Production**

### **9.4.1 Important Actions and Development Framework**

This section describes the actions required for lowland paddy production. The important steps and terms related to this category are described in Table 9-4.

### **9.4.2 Required Actions**

(1) Required actions for income improvements

1. Stable supply of inputs

A quality seed supply is vital to improve the productivity of rice. Currently, SEEDCO is providing reliably good seed to farmers; however, its supply is far below demand. IDPs and returnees will need assistance with their initial inputs for a couple of years. The installation of seed bins is requested for farmers, and cultivation loans are requested for seed producers. Some form of subsidization for farm inputs is needed to help small farmers. The following concrete actions are required to secure stable supply of inputs:

- Strengthen SEEDCO
- Provide initial inputs on a grant basis for IDPs and returnees
- Provide subsidized farm inputs such as fertilizer, tools, and machinery
- Introduce seed bins for store seed paddy storage to FOs or farmers
- Provide cultivation loans to seed paddy farmers

2. Sustainable management of resources

Fertilizer and agro-chemical usage is a major environmental concern in paddy production. The following concrete actions are required to achieve sustainable management of resources:

- Provide education to farmers on the proper use of fertilizer and agrochemicals
- Monitor regularly water pollution and soil salinity

3. Improvement in productivity

Improvements in post-harvest technology, packaged cultivation practices, and appropriate mechanization are required to improve the productivity of paddy rice. The following concrete actions are required for improvement in productivity:

- Formulate a post-harvest technology improvement project
- Develop proper packaging practices in high, medium and low potential areas
- Introduce appropriately mechanized farming techniques

4. Improvements in marketing

Producers of parboiled rice are not well linked with the private sector. Market information does not reach farmers systematically. The following concrete actions are required for improvements in marketing:

- Create a linkage with the private sector for marketing parboiled rice
- Improve farmers' market information system

5. Improvements to infrastructure

Tanks, agro-wells, reservoirs, and canals need to be renovated immediately, and sea water exclusion bunds and abandoned areas should be rehabilitated. Rehabilitated land should be distributed to IDPs and returnees. Rural roads should be improved. Tank networks should be reconstructed. The drainage system also needs to be improved, as do the villages' paddy storage facilities. The following concrete actions are required for improvements to infrastructure:

- Renovate tanks
- Improve existing sea water exclusion bunds
- Renovate agro-wells, ponds, reservoirs, and canals
- Rehabilitate abandoned areas
- Distribute land to IDPs and returnees
- Reconstruct tank networks
- Implement a rural road improvement project
- Improve the drainage system
- Introduce an improved village paddy storage facility

(2) Institutional development

1. Strengthening organizations for the agricultural population

Rice farmers are highly involved with FO activities such as tank renovation and receiving subsidized fertilizer for paddy. However, restructuring the FOs is required to make them lead the rice growing community. Membership of vulnerable groups in the FOs should be assured. The following concrete actions are required to strengthen FOs:

- Conduct an inventory study on innovative FO activities
- Establish an innovative FO model
- Assure vulnerable groups' membership in FOs

- Implement a model FO project
- Implement full-scale restructuring of FOs

## 2. Strengthening public service providers

The extension service is the most important public service in this category. The ASCs are playing an important role in supporting rice farmers, but they are not strong enough to provide good service. Reliable statistical information is essential for practical planning. The following concrete actions are required:

- Strengthen the agriculture extension service capacity
- Modernize DATC
- Strengthen the ASC
- Improve the statistical information system
- Establish a cyber extension service network for the agricultural sector

### **9.4.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be relocated into realistic timelines. Tables 9-5 shows the proposed timelines for the actions in this category.



**Table 9- 4: Framework for Agriculture Development in Jaffna District 2 Lowland Paddy Production**

Category		Lowland Paddy Production			
Strategy		Recovering the paddy field to pre-conflict level and improving its rate of self-sufficiency in the district.			
Issues to be solved		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Income Improvements	Stable supply of inputs	<ul style="list-style-type: none"> <li>Strengthening of SEEDCO <b>AC-1 Strengthening SEEDCO</b>,</li> <li>Provision of initial input on grant basis for IDPs and returnees</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	<ul style="list-style-type: none"> <li>Introduction of seed bin to store seed paddy to FO or farmers</li> <li>Provision of cultivation loan (no interest) to seed paddy farmers</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	Provision of subsidized farm input such as fertilizer, tools, machineries	
	Sustainable management of resources	<ul style="list-style-type: none"> <li>Provision of education to farmers on judicial use of fertilizer and agro-chemicals <b>AC-2 Strengthening extension service</b></li> <li>Implementation of monitoring water pollution and salinity of soil</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of judicial use of fertilizer and agro-chemicals</li> <li>Implementation of Monitoring water pollution and salinity of soil</li> </ul>	Implementation of monitoring water pollution and salinity of soil	
	Improvement in productivity	<ul style="list-style-type: none"> <li>Formulation of a project for post-harvest technology improvement</li> <li>Development of proper package of practices in high, medium and low potential areas</li> <li>Introduction of appropriate mechanized farming (combined harvester , reapers, multi choppers, threshers, two wheel tractor etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of a project for post-harvest technology improvement (drying, storage, milling, parboiling rice, rice flour, rice flour product)</li> <li>Dissemination of proper package of practices in high, medium and low potential areas</li> </ul>	Dissemination of improved post-harvest technology	
	Improvement in marketing	<ul style="list-style-type: none"> <li>Creating a linkage with private sector for marketing parboil rice</li> </ul>	<ul style="list-style-type: none"> <li>Improve market information system for farmers</li> </ul>		
	Improvement to infrastructure	<ul style="list-style-type: none"> <li>Renovation of tanks <b>QIPP</b></li> <li>Improvement of existing sea water exclusion bund</li> <li>Renovation of agro wells, ponds, reservoirs and canals</li> <li>Rehabilitation of abandoned area</li> <li>Distributing land to IDPs and returnees</li> </ul>	<ul style="list-style-type: none"> <li>Reconstruction of tank network</li> <li>Implementation of rural road improvement project</li> <li>Improvement of drainage system</li> <li>Introduction of village wise improved paddy storage facility.</li> </ul>	Implementation of rural road improvement project	
Institutional development	Strengthening organizations for agricultural population	FO	<ul style="list-style-type: none"> <li>Inventory study on innovative FO's activities</li> <li>Establishment of innovative FO model</li> <li>Assurance of vulnerable groups' membership with FOs</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of model FO project</li> </ul>	Full-scale restructuring of FOs
		FS, LIBCO			
	Strengthening public service provider	District level	<ul style="list-style-type: none"> <li>Strengthening of agriculture extension service capacity</li> </ul>	<ul style="list-style-type: none"> <li>Modernization of District Agricultural Training Center</li> <li>Strengthening of Agrarian Services Center</li> <li>Improvement of statistical information system</li> <li>Establishment of cyber extension service network of agricultural sector</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening of Agrarian Services Center</li> </ul>
Provincial level			<ul style="list-style-type: none"> <li>Strengthening of Faculty of Agriculture / UOJ</li> </ul>		

**Table 9- 5: Development Road Map 2 Lowland Paddy Production**

Pilot Project     
  Project     
  Critical Action

As of 02nd July 2011

Goal	Objective	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020																																																																														
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
<b>I. Income Improvements</b>																																																																																																											
1. Stable supply of Inputs	Sub-objective	AC-1		Strengthening of SEEDCO (DOA)																																																																																																							
		Implementation of supplying initial input for IDPs and returnees (DOA, NGOs)						Introduction of seed bin to store seed paddy at FO and Farmers (DAD, DOA)						Provision of cultivation loan to seed paddy farmers (DAD, Banks, Private)						Provision of subsidized farm input (DAD, NGOs)																																																																																							
2. Sustainable management of resources	Sub-objective	AC-2		Provision of education to farmers on judicious use of fertilizer and agro chemicals (DOA)												Dissemination of judicial use of fertilizer and agro chemicals (DOA)																																																																																											
		Implementation of monitoring water pollution and salinity of soil (same as other)																																																																																																									
3. Improvement in productivity	Sub-objective	Formulation of a project for post-harvest technology improvement (DOA, UOJ)						Implementation of a project for post-harvest technology improvement (DOA, UOJ)												Disseminate improved post-harvest technology (DOA)																																																																																							
		Development of proper package of practices in high, medium and low potential areas (DOA, UOJ)						Dissemination of proper package of practices in high, medium and low potential areas (DOA, UOJ)																																																																																																			
		Introduction of appropriate mechanized farming (DOA, DAD, UOJ)																																																																																																									
4. Improvement in Marketing	Sub-objective	Create a linkage with the private sector for marketing parboiled rice (DOA)																																																																																																									
		Improvement of market information system for farmers (DOA, UOJ, Local gov., Private)																																																																																																									
5. Improvement to Infrastructure	Sub-objective	QIPP		Renovation of tanks (DAD, FO)						Reconstruction of tank network (DAD, DOI, FO)						Implementation of rural road improvement project (DAD, Pradeshiya Sabha, Local gov.)																																																																																											
		Improvement of existing sea water exclusion bund (DOI)						Improvement of drainage system (DAD, DOI, FO)																																																																																																			
		Renovation of existing wells, reservoirs and canals (DAD, FO)						Introduction of village wise improved paddy storage facility (DOA, DAD)																																																																																																			
		Rehabilitation of abandoned area (DAD, DOI, NGOs)																																																																																																									
		Distribution of land to IDPs and returnees (DAD)																																																																																																									
<b>II Institutional Development</b>																																																																																																											
1. Strengthening organizations for agricultural population	Sub-objective	Inventory study on innovative FO's activities (DAD, UOJ)						Implementation of model FO project (DAD)												Full-scale restructuring of FOs (DAD)																																																																																							
		Establishment of innovative FO model (DAD)																																																																																																									
		Assurance of vulnerable groups' membership with FOs (DAD)																																																																																																									
2. Strengthening public service providers	Sub-objective	AC-2		Strengthening of agriculture extension service capacity (DOA)												Modernization of District Agriculture Training Center (DOA)																																																																																											
		Strengthening of agrarian service centre (DAD)						Strengthening of agrarian service centre (DAD)																																																																																																			
		Improvement of Statistical information system (DOA, DAD, UOJ)						Establishment of cyber extension network of agriculture sector (DOA, UOJ, DAPH, CCB, PDB, DAD)																																																																																																			
		Strengthening of Faculty of Agriculture / UOJ (UOJ)																																																																																																									

#### 9.4.4 Critical Actions

Among the required actions in the development framework, the Second Workshop voted the following as being the most critical actions for achieving our goals:

1. Strengthen SEEDCO (8)
2. Educate farmers on the proper use of fertilizers and agrochemicals (7)
3. Create a linkage with the private sector for marketing parboiled rice (6)
4. Supply initial inputs on a grant basis to IDPs and returnees (5)
5. a. Disseminate improved post-harvest technology (4)  
b. Modernize DATC (4)
6. a. Strengthen the agriculture extension service capacity (3)  
b. Renovate the tanks (3)  
c. Introduce appropriate mechanized farming (3)  
d. Disseminate proper packaging practices in high, medium, and low potential areas (3)  
e. Implement a post-harvest technology improvement project (3)  
f. Introduce seed bins for seed paddy storage to FOs and farmers (3)

#### 9.4.5 Programmes and Projects for Critical Actions

Through discussions we had with related agencies and stakeholders during the two Development Workshops, we have formulated programmes and projects for those critical actions.

##### The Lowland Paddy Production Development Programme

The Lowland Paddy Production Development Programme is composed of the next five projects: 1) Supporting IDPs and Returnees, 2) Strengthening the Agri-Extension Service Capacity, 3) Providing Environmental Education, 4) Strengthening the Supply of Quality Paddy Seed, 5) Improvement of Post-Harvest Technology. Among those, first three projects are the same as the case of the Highland Vegetable and Fruit Development Programme. The implementing agencies for these projects should be DOA and/or DAD. Basically government budget should be allocated to implement these projects. However, in case the government fund cannot meet the required cost, international assistance should be sought after. Technical assistance from international organizations should be looked for in case the capacity of DOA and/or DAD is inadequate to implement.

Contents of five projects in brief are as follows;

- 1) Supporting IDPs and Returnees: This is the same project for the Highland Vegetable and Fruit Development Programme.
- 2) Strengthening the Agri-Extension Service Capacity: This is the same project for the Highland Vegetable and Fruit Development Programme

- 3) Providing Environmental Education: This is the same project for the Highland Vegetable and Fruit Development Programme
- 4) Strengthening the Supply of Quality Paddy Seed: This is a follow up project for the pilot project AC-1. The activities of this project would include provision of technical training to farmers, strengthening of SEEDCO (establishment of seed testing laboratory, provision of a truck, capacity building for SEEDCO management and workers) and introduction of seed bins to FOs and farmers. DOA would be the implementing agency with the support of international organizations and/or local NGOs.
- 5) Improvement of Post-Harvest Technology: The activities of this project would include, conducting a baseline survey, strengthening FOs, provision of training to farmers, introduction of paddy storage facilities to villages, improvement of parboiling and milling technologies. DOA and DAD would be the implementing agency with the support of international organizations and/or local NGOs.

Details on the programme are shown in Table 9- 6 below.

**Table 9- 6: The Lowland Paddy Production Development Programme**

No.	Programme/ Project title	Location	Project description	Duration (period)	Implementing agency	Estimated cost (in thousands of LKR)
1	Supporting IDPs and returnees	Jaffna District	- Provision of initial inputs to IDPs and returnees - Assurance of vulnerable groups' membership in FOs	2 years (2011–2012)	DAD, DOA	Included in the cost of project No.1 for vegetable and fruit (see Table 9-3)
2	Strengthening the agri-extension service capacity	Jaffna District	- Provision of training to AIs - Modernization of DATC - Establishment of cyber extension network	5 years (2012–2016)	DOA	Included in the cost of project No.2 for vegetable and fruit (see Table 9-3)
3	Providing environmental education	Jaffna District	- Provision of training sessions on proper use of fertilizer and agrochemicals to farmers - Provision of education programme on ground water management to farmers and students - Implementation of campaigns	2 years (2012–2013)	DOA	Included in the cost of the project No.3 for vegetable and fruit (see Table 9-3)
4	Strengthening the supply of quality paddy seed	Jaffna District	-Provision of technical training to farmers - Strengthening of SEEDCO (Establishment of seed testing laboratory, provision of a truck, capacity building for SEEDCO management and workers) - Introduction of seed bins to FOs and farmers	5 years (2011–2016)	DOA	150,000 (LKR 30,000 x 5 years)
5	Improving post-harvest technology	Jaffna District	- Conducting a baseline survey - Strengthening FOs - Provision of training to farmers - Introduction of paddy storage facilities to villages - Improvement of parboiling and milling technologies	5 years (2013–2016)	DOA, DAD	200,000 (LKR 40,000 x 5 years)
Total Estimated Cost (project number 4 and 5)						350,000

#### **9.4.6 Recommendation for Implementation**

- (1) Capacity development of DOA officials

The same for “The Highland Vegetables and Fruits Production Development Programme” is recommended.

- (2) Coordination with related agencies

The same for “The Highland Vegetables and Fruits Production Development Programme” is recommended.

### **9.5 Road Map for Sandy Soil Agriculture in the Outlying Islands and Coastal Areas**

#### **9.5.1 Important Actions and Development Framework**

This section describes the actions required for achieving a development framework for sandy soil agriculture in the outlying islands and coastal areas. The important steps and terms related to this category are described in Table 9-7.

#### **9.5.2 Required Action**

- (1) Required actions for income improvements

1. Stable supply of inputs

Local coconut production satisfies only 20 to 30% of local demand. Supplying adequate coconut seedling is urgent for the betterment of Jaffna, especially for its IDPs and returnees. Coconut- and palmyrah-based intercropping is recommended for sustainable local agriculture. Palmyrah seed collection should be increased to accelerate the recovery of palmyrah yield. Some form of subsidization for farm inputs is needed to help small farmers. The following concrete actions are required for this purpose:

- Reinforce and wider variety in the coconut seedlings supply
- Supply free seedlings to IDPs and returnees
- Supply coconut and palmyrah seedlings for intercropping
- Reestablish a palmyrah seed garden
- Provide subsidized farm inputs such as fertilizer, tools and machinery

2. Sustainable management of resources

Appropriate use of fertilizer and agrochemicals is an important issue, even for sandy soil agriculture. Vegetation recovery is necessary to pre-empt or mitigate future environmental problems in sandy soil areas. The following concrete actions are required to achieve sustainable management of resources:

- Educate farmers on the proper use of fertilizer and agrochemicals
- Promote intercropping and home gardening
- Promote organic manure application
- Monitor water pollution and soil salinity
- Promote wind/green belts
- Promote recycling for plant waste and products

3. Improvement in productivity

Coconut cultivation technology should be improved to increase coconut productivity. New crops should be introduced to diversify the products of sandy soil agriculture. Improved production technologies for palmyrah products such as toddy, jaggery and handy-craft should be disseminated. Research in cultivation technology is necessary to improve the productivity of coconut and palmyrah. A model farm or village should be established to disseminate good practices. The following actions are required for improvement in productivity:

- Disseminate improved coconut cultivation technology through training
- Introduce new crops such as cashew nuts and date palms on an experiment basis
- Provide training in production technologies for palmyrah products
- Research into the improvement of coconut and palmyrah cultural practices such as planting, irrigation, fertilizing, and pest control
- Establish a palmyrah model farm with multipurpose trees
- Set up model coconut villages

4. Improvements in marketing

Palmyrah products have a potential to expand their sales. The following concrete action is required for improvements in marketing:

- Implement a project for the improvement and development of palmyrah products

5. Improvements to infrastructure

The Palmyrah Products Complex should be rehabilitated in order to promote palmyrah products. Improved rural roads would help ease transportation problems. The following concrete actions are required:

- Rehabilitate the Palmyrah Products Complex
- Implement a rural roads improvement project

(2) Institutional development

1. Strengthening organizations for the agricultural population

PSs are playing important roles in the development of coconut and palmyrah. The following concrete actions are required to strengthen them:

- Establish model PSs
- Strengthen the current PSs

2. Strengthening public service providers

A coconut nursery is essential for recovering the coconut yield. Enhancing the PDB and reestablishing the Palmyrah Research Institute are necessary for the restoration of the palmyrah industry. A statistical information system and an extension service network are important for sandy soil agriculture as well. The following concrete actions are required to strengthen public service providers:

- Rehabilitate the coconut nursery
- Strengthen PDB
- Establish an additional coconut nursery
- Improve the statistical information system
- Establish a cyber extension service network for the agricultural sector
- Strengthen the Faculty of Agriculture, UOJ
- Reestablish the Palmyrah Research Institute

### **9.5.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be allocated realistic timelines. Tables 9-8 shows the proposed timelines for the actions in the development category.

**Table 9- 7: Framework for Agriculture Development in Jaffna District 3 Sandy Soil Agriculture in the Outlying Islands and Coastal Areas**

Category		Sandy Soil Agriculture Production at Outlying Islands and Coastal Areas			
Strategy		Recovering suitable crops for sandy soil to pre-conflict level and achieving self-sufficiency and promoting value added sale			
Issues to be solved		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Income Improvements	Stable supply of inputs	<ul style="list-style-type: none"> <li>Reinforcement of supplying coconut seedlings of improved variety <b>AC-5 Rehabilitation of coconuts nursery</b></li> <li>Implementation of supplying free seedlings to IDPs and returnees</li> <li>Implementations of supplying seedlings of coconut and Palmyrah for intercropping.</li> <li>Reestablishment of seed garden for Palmyrah</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	<ul style="list-style-type: none"> <li>Reinforcement of supplying coconut seedlings of improved variety (Establishment of additional coconut nurseries, encouraging private nursery man for quality seedling supply)</li> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	<ul style="list-style-type: none"> <li>Provision of subsidized farm input such as fertilizer, tools, machineries</li> </ul>	
	Sustainable management of resources	<ul style="list-style-type: none"> <li>Provision of education to farmers on judicious use of fertilizer and agro. chemicals <b>AC-2 Strengthening extension service</b></li> <li>Promotion of intercropping and home garden</li> <li>Promotion of organic manure application</li> <li>Implementation of monitoring water pollution and salinity of soil</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of judicious use of fertilizer and agro. chemicals</li> <li>Promotion of establishing wind/green belts</li> <li>Promotion of organic manure application</li> <li>Implementation of monitoring water pollution and salinity of soil</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of recycling the plant wastes and products.</li> <li>Implementation of monitoring water pollution and salinity of soil</li> </ul>	
	Improvement in productivity	<ul style="list-style-type: none"> <li>Dissemination of improved coconut cultivation technology (provision of training) <b>AC-5 Rehabilitation of coconuts nursery</b></li> <li>Experimental introduction of new crops such as cashew nuts and date palm</li> <li>Provision of training on production technology of Palmyrah products</li> <li>Implementation of research for the improvement of coconut and Palmyrah cultural practices; planting, irrigation, fertilizing and pest control</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of improved coconut cultivation technology</li> <li>Introduction of new crops such as cashew nut and date palm</li> <li>Establishment of Palmyrah model farm with multipurpose trees</li> <li>Establishment of coconut model villages</li> <li>Implementation of research for the improvement of coconut and Palmyrah cultural practices; planting, irrigation, fertilizing and pest control</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of new crop cultivation</li> <li>Dissemination of Palmyrah model farms</li> <li>Dissemination of coconut model village</li> </ul>	
	Improvement in marketing	<ul style="list-style-type: none"> <li>Formulation of a project for improvement and development of Palmyrah products; short term market and supply chain research</li> </ul>	<ul style="list-style-type: none"> <li>Implement a project for improvement and development of Palmyrah products; value chain research, upgrading of quality, quality control, improvement of distillers, upgrading of sale out lets, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Expand sale of Palmyrah product</li> <li>Implement a project for improvement and development of Palmyrah products; establish new sales outlet.</li> </ul>	
	Improvement to infrastructure	<ul style="list-style-type: none"> <li>Rehabilitation of Palmyrah Products Complex</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> </ul>	
Institutional Development	Strengthening organizations for agricultural population	FO			
		FS, LIBCO	<ul style="list-style-type: none"> <li>Establishment of model Palm Development Cooperative Societies</li> <li>Strengthening of coconut and Palmyrah societies (Palm development cooperative societies)</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of model Palm Development Cooperative Societies</li> <li>Strengthening of coconut and Palmyrah societies (Palm development cooperative societies)</li> </ul>	<ul style="list-style-type: none"> <li>Increment of business activities of Palm Development Cooperative Societies</li> </ul>
	Strengthening public service provider	District level	<ul style="list-style-type: none"> <li>Rehabilitation of coconut nursery <b>AC-5 Rehabilitation of coconut nursery</b></li> <li>Strengthening of Palmyrah Development Board</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of additional coconut nursery</li> <li>Improvement of statistical information system</li> <li>Establishment of cyber extension service network of agricultural sector</li> </ul>	
		Provincial level		<ul style="list-style-type: none"> <li>Strengthening of Faculty of Agriculture / UOJ</li> <li>Reestablishment of Palmyrah Research Institute (PRI).</li> </ul>	



**Table 9- 8: Development Road Map 3 Sandy Soil Agricultural Production in the Outlying Islands and Coastal Areas**

Pilot Project     
  Project     
  Critical Action

As of 09th July 2011

Goal	Objective	2011												2012												2013												2014												2015												2016												2017												2018												2019												2020																																																																																																									
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
<b>I. Income Improvements</b>																																																																																																																																																																																																																							
1. Stable supply of Inputs	AC-5	Reinforcement of supplying coconut seedlings of improved variety (CCB)																																																																																																																																																																																																																					
	IRC	Implementation of supplying free seedlings to IDPs and returnees (CCB)																																																																																																																																																																																																																					
		Implementation of supplying seedling of coconut and Palmyrah for intercropping (CCB, PDB)																																																																																																																																																																																																																					
		Establishment of seed garden for Palmyrah (PDB)																																																																																																																																																																																																																					
		Provision of subsidized farm input (CCB, PDB)																																																																																																																																																																																																																					
2. Sustainable management of resources	AC-2	Provision of education to farmers on judicious use of fertilizer and agro chemicals (DOA, CCB)												Dissemination of judicious use of fertilizer and agro chemicals (DOA,CCB)												Promotion of recycling the plant wastes and product (CCB, PDB, UOJ)																																																																																																																																																																																													
		Promotion of intercropping and home garden (CCB, PDB, DOA)												Promotion of establishing wind/green belt (CCB, PDB)												Promotion of organic manure application (CCB, DOA, Local Gov, DAPH)																																																																																																																																																																																													
		Implementation of monitoring water pollution and salinity of soil (same as others)																																																																																																																																																																																																																					
		Dissemination of improved coconut cultivation technology; training (CCB, DOA)																																																																																																																																																																																																																					
		Dissemination of new crop cultivation (DOA, PDB, CCB)																																																																																																																																																																																																																					
3. Improvement in productivity	AC-5	Experimental introduction of new crops such as cashew nuts and date palm (DOA, PDB, CCB)												Introduction of new crops such as cashew nut and date palm (DOA, PDB, CCB)												Dissemination of new crop cultivation (DOA, PDB, CCB)																																																																																																																																																																																													
	IRC	Provision of training on production technology of Palmyrah products (PDB)																																																																																																																																																																																																																					
		Implementation of research for the improvement of cultural practices of coconut and Palmyrah (CCB, PDB, UOJ)																																																																																																																																																																																																																					
		Establishment of Palmyrah model farms with multipurpose trees (PDB, Palm society)												Dissemination of Palmyrah model farms with multipurpose trees (PDB, Palm society)																																																																																																																																																																																																									
		Establishment of coconut model villages (CCB, Palm society)												Dissemination of coconut model villages (CCB, Palm society)																																																																																																																																																																																																									
		Dissemination of improved coconut cultivation technology; training (CCB, DOA)																																																																																																																																																																																																																					
4. Improvement in Marketing		Formulating a project for improvement and development of Palmyrah products (PDB, Palm society)												Implementing a project for improvement and development of Palmyrah products (PDB, Palm society)																																																																																																																																																																																																									
5. Improvement to Infrastructure		Rehabilitation of Palmyrah Products Complex (PDB)												Implementation of rural road improvement project (same as others)																																																																																																																																																																																																									
<b>II Institutional Development</b>																																																																																																																																																																																																																							
1. Strengthening organizations for agricultural population																																																																																																																																																																																																																							
1) Farmers' Organization																																																																																																																																																																																																																							
	2) Producers Cooperative Societies (FS)	Establishment of model Palm Development Cooperative Societies (CCB, PDB)												Incrementation of business activities of Palm Development Cooperative Societies (CCB, PDB)																																																																																																																																																																																																									
		Strengthening of Palm Development Cooperative Societies (CCB, PDB)												Assurance of Vulnerable groups' membership with Palm Development Cooperative Societies (CCB, PDB)																																																																																																																																																																																																									
2. Strengthening public service providers																																																																																																																																																																																																																							
1) District level	AC-5	Rehabilitation of coconut nursery (CCB)												Establishment of additional coconut nursery (CCB)																																																																																																																																																																																																									
	URC Bach 2																																																																																																																																																																																																																						
		Improvement of Statistical information system (DOA, DAD, UOJ)												Establishment of cyber extension service network of agriculture sector (DOA,UOJ, DAPH, CCB, PDB, DAD)																																																																																																																																																																																																									
2) Provincial level																																																																																																																																																																																																																							
	Strengthening of Faculty of Agriculture / UOJ (UOJ)												Reestablishment of Palmyrah Research Institute (PDB)																																																																																																																																																																																																										

#### 9.5.4 Critical Actions

Among the required actions in the development framework, the Second Workshop voted the following as being the most critical actions for achieving our goals:

1. Disseminate (immediate and short terms) improved coconut cultivation technology (8)
2. Increase the supply of improved varieties of coconut seedlings (7)
3. Formulate improvement and development projects (both immediate and short terms) for palmyrah products; conduct short-term market and supply chain research (6)
4. a. Provide training in production technologies for palmyrah products (5)  
b. Strengthen the coconut and palmyrah elements of PSs in the immediate and short terms (5)
5. a. Educate farmers in the proper use of fertilizers and agrochemicals (3)  
b. Research improvements to coconut and palmyrah cultural practices; planting, irrigation, fertilizing, and pest control (3)

This result of the voting was quite reasonable and acceptable for critical actions. However, the Team proposes to include assistance to IDPs and returnees as a critical action.

#### 9.5.5 Programmes and Projects for Critical Actions

Through discussions we had with related agencies and stakeholders during the two Development Workshops, we have formulated programmes and projects for those critical actions.

##### The Sandy Soil Agriculture Development Programme

The sandy soil agriculture development programme is composed of three projects: 1) Palm Cultivation for IDPs and Returnees, 2) Reinforcing the Supply of Coconut Seedlings and Coconut Cultivation Technology, and 3) Improving and Developing Palmyrah Products. The implementing agencies for these projects would be CCB or PDB. Basically government budget should be allocated to implement these projects. However, in case of the government fund cannot meet the required cost, international assistance should be sought after. Technical assistance from international agency should be looked for in case the capacity of CCB or PDB is inadequate to implement.

Contents of three projects in brief are as follows;

- 1) Palm Cultivation for IDPs and Returnees: The activities of this project would include provision of free seedlings and fertilizer to IDPs and returnees and assurance of vulnerable groups' membership in PSs. CCB and PDB would be responsible to implement the project. Government fund would be the source of budget.
- 2) Reinforcing the Supply of Coconut Seedlings and Coconut Cultivation Technology: This is a follow up project for the pilot project AC-5. The activities would include, capacity building of Atchchuveli Coconut Nursery, supplying subsidized seedlings, establishment of an additional coconut nursery,

provision of technical training to farmers. The implementing agency would be CCB. Government fund and foreign assistances would be the main source of budget.

- 3) Improving and Developing Palmyrah Products: The activities of this project would include, provision of training to PSs' members, sap collectors, distillers, and handicraft makers, researching improvements to palmyrah products, capacity building of PSs, provision of financial support for the renovation of the production facilities, strengthening sales outlets. PDB and PSs would take responsibility to implement with foreign assistances. Government fund and foreign assistances would be the main source of budget.

Details on the programme are shown in Table 9- 9 below.

**Table 9- 9: The Sandy Soil Agriculture Development Programme**

No	Programme/ Project title	Location	Project description	Duration (period)	Implementing agency	Estimated cost (in thousands of LKR)
1	Palm cultivation for IDPs and returnees	Jaffna District	- Provision of free seedlings and fertilizer to IDPs and returnees - Assurance of vulnerable groups' membership in PSs	2 years (2011–2012)	CCB, PDB	5,000
2	Reinforcing the supply of coconut seedlings and coconut cultivation technology	Jaffna District	- Capacity building of Atchchuveli coconut nursery - Supplying subsidized seedlings - Establishment of an additional coconut nursery - Provision of technical training to farmers	5 years (2012–2016)	CCB	125,000 (LKR25,000 x 5 year)
3	Improving and developing palmyrah products	Jaffna District	- Provision of training to PSs' members, sap collectors, distillers, and handicraft makers - Researching improvements to palmyrah products - Capacity building of PSs - Provision of financial support for the renovation of the production facilities - Strengthening sales outlets	6 years (2012–2017)	PDB	240,000 (LKR40,000 x 6 year)
Total Estimated Cost						370,000

### 9.5.6 Recommendation for Implementation

- (1) Coordination with related agencies

Though CCB and PDB will be major implementing agencies of this programme, some of their activities are interlinked and sometimes even overlapped with DOA, DCD and IDB. Before the implementation of the proposed projects, CCB, PDB and supporting agency should share project information with relevant institutions and coordinate project activities with them.

## **9.6 Road Map for Livestock production**

### **9.6.1 Important Actions and Development Framework**

This section describes the actions required for achieving a development framework for livestock production. The important steps and terms related to this category are described in Table 9-10

### **9.6.2 Required Action**

#### (1) Required actions for income improvements

##### 1. Stable supply of inputs

Supplies of chicks and goats of improved breeds should be enhanced to improve productivity. IDPs and returnees will need assistance with their initial inputs for a few more years. Some form of subsidization for farm inputs is necessary to help small farmers. The following concrete actions are required to secure stable supply of inputs:

- Reinforce the supplies of offspring of improved breeds, especially poultry and goats (including encouraging private mini-poultry breeder farms and private goat breeder farms)
- Provide initial inputs on a grant basis to IDPs and returnees
- Assist vulnerable people's access financial institutions
- Provide subsidized farm inputs (e.g., heifer calves)

##### 2. Sustainable management of resources

Livestock farm legislation and the Animal Act should be thoroughly enforced in order to render animal husbandry harmless to the environment. Producing bio-gas from livestock waste and recycling livestock and slaughterhouse waste are recommended to reduce animal waste. The following concrete actions are required:

- Enforce livestock farm legislation
- Enforce the Animal Act
- Establish a bio-gas plant
- Recycle livestock and slaughterhouse waste

##### 3. Improvement in productivity

AIns, heifer rearing, cultivation of fodder crops, feed resources, education of youth and women, and value addition are the priority issues in the improvement of livestock productivity. The following concrete actions are required for improvement in productivity:

- Promote AIns
- Enhance a heifer rearing scheme
- Extend fodder crops cultivation
- Establish a feed resource center
- Implement a kids' salvage programme
- Strengthen livestock rearing technology education for the youth and women
- Promote advanced training in value-added products for stakeholders

#### 4. Improvements in marketing

To improve the marketing of livestock products, the following steps are necessary: 1) a survey on livestock marketing; 2) educating consumers about the benefits of dairy products and local milk; 3) increasing milk processing capacity; 4) diversifying the processed products; 5) establishing a cold chain; and 6) improving the market information system. The following concrete actions are required for improvements in marketing:

- Promote dairy product consumption among pre-school children
- Promote local milk consumption
- Reinforce the milk processing capacity
- Implement a baseline survey on livestock marketing and population
- Diversify processed livestock products
- Establish a cold chain (improving the milk collection network and sales outlets)
- Improve the market information system for farmers

#### 5. Improvements to infrastructure

Rehabilitating abandoned areas helps increase the grazing yardage. Rural road improvements will help facilitate the transportation of livestock products. Slaughterhouses, livestock sheds, livestock markets, and meat markets are required to develop livestock production. The following concrete actions are required for this:

- Rehabilitate abandoned areas
- Construct slaughterhouses
- Reconstruct livestock housing facilities
- Establish livestock markets
- Implement a rural road improvement project
- Establish a meat market

### (2) Institutional development

#### 1. Strengthening organizations for the agricultural population

LIBCOs are expected to be major players in livestock development, but most of them are now inactive. The involvement of IDPs and returnees in them will also be important. The following concrete actions are required:

- Strengthen LIBCOs (six have already started)
- Encourage IDPs and returnees to join LIBCOs
- Assure vulnerable groups' memberships in LIBCOs
- Expand LIBCOs' business activities

#### 2. Strengthening public service providers

Public service providers must take the following actions toward the effective implementation of the above-mentioned livestock strategies:

- Develop capacity in the public service's livestock-development human resources
- Strengthen the Regional Farm Atchchuvley (Poultry)
- Strengthen the AIns Center
- Strengthen the VS offices and the Veterinary Investigation Center (which has already been established but needs improved facilities)
- Construct a Training Center (planned to start in 2013)
- Improve the statistical information system, including UOJ
- Establish a cyber extension service network for the agricultural sector
- Strengthen the Faculty of Agriculture, UOJ

### **9.6.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be allocated realistic timelines. Tables 9-11 shows the proposed timelines for the actions in the development category.

**Table 9- 10: Framework for Agriculture Development in Jaffna District 4 Livestock Production**

Category		Livestock Production		
Strategy		Considering livestock as a part of integrated farming. Recovering number of livestock to pre-conflict level and improving its rate of self-sufficiency in the District by introducing suitable breed, and promoting value added sale		
Issues to be solved		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-)
Income Improvements	Stable supply of inputs	<ul style="list-style-type: none"> <li>Reinforcement of supplying offspring of improved breeds, especially poultry and goat (including encouraging private mini poultry breeder farm and private goat breeder farm / division)</li> <li>Provision of initial input on grant basis for IDPs and returnees</li> <li>Provision of assistance to vulnerable people to access to financial institutions</li> <li>Provision of subsidized farm inputs (ex. heifer calf)</li> </ul>	<ul style="list-style-type: none"> <li>Reinforcement of supplying offspring of improved breeds, especially poultry and goat</li> <li>Provision of assistance to vulnerable people to access to financial institutions (Seed money, Subsidy scheme, Bank Loan)</li> <li>Provision of subsidized farm inputs (ex. heifer calf)</li> </ul>	<ul style="list-style-type: none"> <li>Assistance to vulnerable people to access to financial institutions (Seed money, Subsidy scheme, Bank Loan)</li> <li>Provision of subsidized farm inputs (ex. heifer calf)</li> </ul>
	Sustainable management of resources	<ul style="list-style-type: none"> <li>Enforcement of livestock farm legislation</li> <li>Enforcement of Animal act</li> <li>Establishment of Bio gas plant</li> <li>Recycling of livestock/ slaughter house waste</li> </ul>	<ul style="list-style-type: none"> <li>Establishment of Bio gas plant</li> <li>Enforcement of livestock farm legislation</li> <li>Enforcement of Animal act</li> </ul>	<ul style="list-style-type: none"> <li>Enforcement of livestock farm legislation</li> <li>Enforcement of Animal act</li> </ul>
	Improvement in productivity	<ul style="list-style-type: none"> <li>Promotion of artificial insemination</li> <li>Enhancement of heifer rearing scheme</li> <li>Extension of cultivation of fodder crops</li> <li>Establishment of feed resource center</li> <li>Implementation of kids' salvage programme</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of artificial insemination</li> <li>Enhancement of heifer rearing scheme</li> <li>Extension of cultivation of fodder crops (including establishment of pasture and fodder units)</li> <li>Strengthening of education of livestock rearing technology to youths and women</li> <li>Promotion of advanced training on value added products for stake holders</li> <li>Establishment of feed resources center</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of artificial insemination</li> <li>Extension of cultivation of fodder crops</li> <li>Strengthening of education of livestock rearing technology to youths and women</li> <li>Promotion of advanced training on value added products for stake holders</li> </ul>
	Improvement in marketing	<ul style="list-style-type: none"> <li>Promotion of dairy product consumption - pre school children</li> <li>Promotion of local milk consumption</li> <li>Reinforcement of milk processing capacity <b>AC-6 Improvement of milk processing facilities</b></li> <li>Implementation of baseline survey on livestock marketing, livestock population</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of dairy product consumption - pre school children</li> <li>Promotion of local milk consumption</li> <li>Diversification of livestock processed products - introducing to the public.</li> <li>Establishment of cold chain (improvement of milk collection network and milk sales outlets)</li> <li>Improvement of market information system for farmers</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of local milk consumption</li> <li>Establishment of cold chain (improvement of milk collection network and milk sales outlets)</li> </ul>
	Improvement to infrastructure	<ul style="list-style-type: none"> <li>Rehabilitation of abandoned area</li> <li>Construction of slaughter house</li> <li>Reconstruction of livestock housing facilities</li> <li>Establishment of livestock markets,</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> <li>Establishment of livestock markets,</li> <li>Rehabilitation of abandoned area</li> <li>Construction of slaughter house</li> <li>Reconstruction of livestock housing facilities</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of rural road improvement project</li> <li>Establishment of meat market</li> </ul>
Institutional development	Strengthening organizations for agricultural population	FO		
		FS, LIBCO	<ul style="list-style-type: none"> <li>Strengthening of LIBCO - for 6 LIBCOs already started <b>AC-6 Improvement of milk processing facilities</b></li> <li>Encouragement to IDPs and returnees to join LIBCOs</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening of LIBCOs</li> <li>Encouragement to IDPs and returnees to join LIBCOs</li> <li>Assurance of the vulnerable groups' membership with LIBCOs</li> </ul>
	Strengthening public service provider	District level	<ul style="list-style-type: none"> <li>Capacity development of human resources for public service of livestock development</li> <li>Strengthening of Regional Farm Atchchuvley - Poultry</li> <li>Strengthening of AInS Center</li> </ul>	<ul style="list-style-type: none"> <li>Strengthening of VS offices and Veterinary Investigation Center (VIC already established but need be improved with facilities)</li> <li>Capacity development of human resources for public service for livestock development</li> <li>Strengthening of Regional Farm Atchuvley</li> <li>Construction of Training Center - plan to start on 2013</li> <li>Improvement of statistical information system - include UoJ</li> <li>Establishment of cyber extension service network of agricultural sector</li> </ul>
Provincial level			Strengthening of Faculty of Agriculture / UOJ	

**Table 9- 11: Development Road Map 4 Livestock Production**

Pilot Project    
  Project    
  Critical Action

As of 11th July 2011

Goal	Objective	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020																																																																		
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
<b>I. Income Improvements</b>																																																																																															
1. Stable supply of Inputs	Sub-objective	Reinforcement of supplying offspring of improved breeds for especially poultry and goat (DAPH)																																																																																													
		Implementation of Supplying initial input for IDPs and returnees (DAPH)																																																																																													
		Assistance to vulnerable people to access to financial institutions (DAPH)																																																																																													
		Provision of subsidized farm inputs (DAPH)																																																																																													
		Enforcement of livestock farm legislation (DAPH)																																																																																													
2. Sustainable management of resources	Sub-objective	Establishment of bio gas plant (DAPH)																																																																																													
		Enforcement of Animal act (DAPH)																																																																																													
		Recycling of livestock/slaughter house waste (DAPH)																																																																																													
3. Improvement in productivity	Sub-objective	Promotion of artificial insemination (DAPH)																																																																																													
		Enhancement of heifer rearing scheme (DAPH)																																																																																													
		Extension of fodder crops cultivation (DAPH)																																																																																													
		Establishment of pasture and fodder units(DAPH)																																																																																													
		Implementation of Kids salvage programme (DAPH)																																																																																													
4. Improvement in Marketing	Sub-objective	Promotion of dairy product consumption (DAPH, LIBCO)																																																																																													
		Promotion of local milk consumption (DAPH, LIBCO)																																																																																													
		Diversification of processed products of livestock (DAPH, LIBCO, Private)																																																																																													
		Establishment of cold chain, improvement of milk collection and milk sales outlets (DAPH, LIBCO, Private)																																																																																													
		Improvement of market information system for farmers (DOA, DAPH)																																																																																													
5. Improvement to Infrastructure	Sub-objective	Rehabilitation of abandoned area (DAD, DOA, DOI, UOJ)																																																																																													
		Construction of slaughter house (Local Gov., DOH, DAPH)																																																																																													
		Reconstruction of livestock housing facilities (DAPH)																																																																																													
		Establishment of meat market (DAPH, LIBCO)																																																																																													
		Implementation of rural road improvement project																																																																																													
<b>II Institutional Development</b>																																																																																															
1. Strengthening organizations for agricultural population																																																																																															
1) Farmers' Organization	Sub-objective																																																																																														
2) Producers Cooperative Societies (FS)	Sub-objective	AC-6 Strengthening of LIBCOs (DAPH)																																																																																													
		Encouragement to IDPs and returnees to join LIBCOs (DAPH, LIBCO)																																																																																													
2. Strengthening public service providers																																																																																															
1) District level	Sub-objective	Strengthening of Regional Farm Atchchuvly (DAPH)																																																																																													
		Strengthening of VS offices and Veterinary Investigation Center (DAPH)																																																																																													
		Construction of training center (DAPH)																																																																																													
		Improvement of statistical information system (District Secretariat, UOJ, DAPH)																																																																																													
		Establishment of cyber extension service network of agriculture sector (DOA, UOJ, DAPH, DAD, CCB, PDB)																																																																																													
2) Provincial level	Sub-objective	Capacity development of human resources for public service of livestock development (DAPH)																																																																																													
		Strengthening Faculty of Agriculture / UOJ (UOJ)																																																																																													



#### **9.6.4 Critical Actions**

Among the required actions in the development framework, the Second Workshop voted the following as being the most critical actions for achieving our goals:

1. Increase the supply of offspring of improved breeds, especially poultry and goats (6)
2. Promote AIns (6)
3. Reconstruct livestock housing facilities (5)
4. a. Increase milk processing capacity (4)  
b. Extend cultivation of fodder crops (4)  
c. Strengthen VS offices and the Veterinary Investigation Center (4)

This result is quite reasonable and acceptable for critical actions. However, the Team proposes to include assistance to IDPs and returnees as a critical action, since our target will not be achieved without lifting up IDPs and returnees.

#### **9.6.5 Programme and Projects for Critical Actions**

Through discussions we had with related agencies and stakeholders during the two Development Workshops, we have formulated programmes and projects for those critical actions.

##### The Livestock Development Programme

The Livestock Development Programme is composed of the following five projects: 1) Livestock for IDPs and Returnees, 2) Supplying Improved Breeds of Chicks and Goats, 3) Promotion of AIns, 4) Improvement of Livestock Management, 5) Reinforcing the Milk Processing Capacity of LIBCO. The implementing agency for these projects would be DAPH. Basically government budget should be allocated to implement these projects. However, in case of the government fund cannot meet the required cost, international assistance should be sought after. Technical assistance from international agency should be looked for in case the capacity of DAPH is inadequate to implement.

Contents of five projects in brief are as follows;

- 1) Livestock for IDPs and Returnees: This project would aim to assist IDPs and returnees to start livestock rearing to generate income. Initial input for livestock rearing would be provided and technically followed up. Also they would be encouraged to join LIBCOs. DAPH would be a implementing as well as a coordinating agency. Local NGOs would be invited to support activities. Government fund and foreign assistances would be the main source of budget.
- 2) Supplying Improved Breeds of Chicks and Goats: This project would aim to improve productivity of chicken and goat by introducing new breeds. Regional poultry farm would be upgraded and improved breeds of chicks would be supplied. Improved breeds of goats would be supplied via encouraging Private goat breeder farm. DAPH would be the implementing agency. Government fund and foreign assistances would be the main source of budget.

- 3) Promotion of AIns: This project would aim to improve productivity of cow through promoting AIns. AIns center would be renovated and more AIns would be practiced with subsidized price. Implementing agency would be DAPH. Government fund and foreign assistances would be the main source of budget.
- 4) Improvement of Livestock Management: The activities would includes, provision of technical training to farmers, reconstruction of livestock housing facilities, expanding fodder crops cultivation, and establishment of village wise pasture and fodder units. DAPH would be the implementing agency. Government fund and foreign assistances would be the main source of budget.
- 5) Reinforcing the Milk Processing Capacity of the LIBCO: This is a follow up project of the pilot project AC-6. The activity would includes, establishment of milk processing unit at LIBCO, capacity building of LIBCO, provision of training to farmers, and improvement of sales outlets of LIBCO. DAPH would take responsibilities for implementing this project, with support of international assistance.

Details on the programme are shown in Table 9- 12: The Livestock Production Development Programme below.

**Table 9- 12: The Livestock Production Development Programme**

No.	Programme/ Project title	Location	Project description	Duration (period)	Implementing agency	Estimated cost (in thousands of LKR)
1	Livestock for IDPs and returnees	Jaffna District	- Provision of initial inputs to IDPs and returnees - Encouragement to IDPs and returnees to join LIBCOs	2 years (2011–2012)	DAPH	40,000 (1000 household × LKR 40,000)
2	Supplying improved breeds of chicks and goats	Jaffna District	- Strengthening regional poultry farm Atchchuvely - Encouraging private mini-poultry breeders - Encouraging private goat breeder farms (in divisions)	4 years (2012–2015)	DAPH	200,000 (LKR 50,000 x 4 years)
3	Promotion of Artificial Insemination (AIns)	Jaffna District	- Strengthening the AIns Center - Provision of subsidy for AIns	4 years (2012–2015)	DAPH	200,000 (LKR 50,000 x 4 years)
4	Improvement of livestock management	Jaffna District	- Provision of technical training to farmers - Reconstruction of livestock housing facilities - Expanding fodder crops cultivation - Establishment of village wise pasture and fodder units	5 years (2011–2016)	DAPH	100,000 (LKR 20,000 x 5 years)
5	Reinforcing the milk processing capacity of the LIBCO	Jaffna District	- Establishment of milk processing unit at LIBCO - Capacity Building of LIBCO - Provision of training to farmers - Improvement of sales outlets of LIBCO	5 years (2011–2016)	DAPH	100,000 (LKR 20,000 x 5 years)
Total						LKR 640,000

## **9.6.6 Recommendation for Implementation**

### (1) Capacity development of DAPH officials

DAPH will be a major implementing agency of this programme. At the moment, capability of DAPH is fairly limited since the many vacancies of official position are not filled and present officials, especially LDOs, haven't had much chance to be trained due to the prolonged conflict. For the implementation of the projects proposed here, GOSL should employ new officers as quickly as possible, in addition to develop the capacity of the existing officers and consider measures to keep their motivation high.

### (2) Coordination with related agencies

Though DAPH will be a major implementing agency of this programme, some of their activities are interlinked and sometimes even overlapped with DOA, DCD and IDB. Before the implementation of the proposed projects, DAPH and supporting agency should share project information with relevant institutions and coordinate project activities with them.

## **9.7 Road Map for Sustainable System for Coastal Fisheries**

### **9.7.1 Important Actions and Development Framework**

This section describes the actions required for achieving a sustainable system for coastal fisheries in Jaffna. The important steps and terms related to this category are described in Table 9-14.

There are two main options for achieving our targets - livelihood enhancement and institutional development - that need to be analyzed for their development potential and needed resources. The livelihood enhancement option involves the following aspects: 1) adequate operational supplies; 2) optimum utilization of resources; 3) productivity improvement; 4) marketing improvement; and 5) infrastructure improvement. On the other hand, the institutional development option involves the following aspects: 1) strengthening of FCS; 2) strengthening of district-level administration; and iii) strengthening of national-level administration.

### **9.7.2 Required Actions**

#### (1) Required actions for livelihood enhancement

##### 1. Adequate operational supplies

The current supply of ice in Jaffna District is far below demand and thus, further efforts are necessary to enable fishermen to widen their fishing grounds and harvest better quality fish. The following concrete actions are required for an adequate and sustainable ice supply:

- Invite ice-making plants into the district
- Increase production capacity to 150 tons per day in the short-term
- Increase production capacity to 300 tons per day in the mid-term

## 2. Optimum utilization of resources

This is one of the most important aspects for establishing a sustainable system for coastal fisheries. This involves introducing and promoting community-based fisheries management to fishermen in Jaffna District and establishing a co-management system through research assessment on coastal fishery resources in the long run. The following concrete actions are required to achieve an optimum utilization of resources:

- Promote awareness among fishermen of fishery resources management and conservation
- Introduce and promote community-based fisheries management
- Introduce a co-management system for fishery resources and teach important concepts such as marine protected areas and the license system
- Research on coastal fishery resources

## 3. Productivity improvement

Productivity improvement for a sustainable system for coastal fisheries requires the introduction and promotion of FAD and other fishing-ground development methods such as the installation of artificial reefs, establishment of marine-protected areas, and expansion of sea-grass areas in coastal fishing grounds accompanied by the stocking the sea and lagoon with fry of potential species. The introduction and promotion of better fish processing practices is expected to bring post-harvest improvement which is essential for the utilization and conservation of limited coastal resources. The following concrete actions are required for productivity improvement:

- Test implementation and promotion of FAD
- Promote safety operation technologies
- Introduce and promote improved fish processing
- Formulate and implement a coastal fishing ground development plan

## 4. Marketing improvement

The rehabilitation of fish auction halls, wholesale markets, and consumer markets needs to be addressed urgently to normalize fishery activities. Facilitating direct fish exportation from Jaffna is one of the short-term issues. The following concrete actions are required for market improvement:

- Rehabilitate and improve fish auction halls
- Improve consumer markets
- Promote local fish exporters
- Establish a well-planned marketing strategy

## 5. Infrastructure improvement

The rehabilitation and improvement of the fisheries infrastructure is one of the goals of marketing improvement. The infrastructure required includes fish landing sites, jetties, and other facilities necessary for fishing operations such as water and fuel supply, ice storage, and safety infrastructures such as a beacon and lighthouse. The following concrete actions are required for infrastructure improvement:

- Develop fish landing infrastructure
- Develop fisheries infrastructure such as water supply facilities, ice storage, fishermen's lockers, and access to roads
- Develop safety infrastructure

(2) Required actions for institutional development

1. Strengthening of FCS

The FCSes are the most important organizations in coastal communities, and many socially-disadvantaged individuals are able to earn incomes through work obtained from the FCSes.

The following concrete actions are required to strengthen the FCSes in Jaffna District:

- Create an inventory of FCS best practices
- Establish a new FCS model
- Improve the mutual assistant system for socially-disadvantaged members
- Strengthen the FCS network

2. Strengthening district-level administration

Top-down scientific fisheries management is necessary for the establishment of a co-management system and is based on accurate fisheries statistics and scientific research on resource assessment.

The following concrete actions are required for strengthening district-level administration:

- Learn and review fishery statistic systems
- Introduce a new, online fisheries statistic system
- Promote the practical use of fishery statistics to the fisheries management system
- Establish a fisheries database in DFAR
- Train for capacity building of DFAR officers
- Strengthen Department of Fisheries, UOJ

### **9.7.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be relocated into realistic timelines. Tables 9-15 shows the proposed timelines for the actions in this category.

### **9.7.4 Critical Actions**

Among the actions discussed in the development framework are those more critical for achieving our goals. The following critical actions have been identified by the Team from the discussions with stakeholders during the First and Second Development Workshops in Jaffna and on other occasions:

- Rehabilitate and improve fish auction halls
- Develop fish landing infrastructure
- Formulate and implement the fishery infrastructure development plan which includes water supply facilities, ice storage, fishermen's lockers, access roads, and other necessary infrastructures

- Establish a new FCS model
- Strengthen the mutual assistant system of FCS for socially-disadvantaged members
- Establish a fisheries database
- Establish community-based coastal fisheries management
- Implement research on coastal fishery resources
- Initiate a model project for new FCSes

### **9.7.5 Programmes and Projects for Critical Actions**

Through discussions we had with related agencies and stakeholders during the First and Second Development Workshops for the Fisheries Sector, we have formulated programmes and projects for those critical actions as follows.

#### The Programme for Strengthening Fishermen's Organization in Coastal Communities

At present, most of the fishery production comes from the coastal fisheries in Jaffna District. However, participants from both workshops concurred that the coastal fishery resources are being threatened by Indian trawlers and the rapid increase of small-scale fishing crafts in the district. As such, the participants concluded that maintaining the sustainability of the coastal fisheries system is of utmost importance and that the strengthening of fishermen's organizations is necessary to achieve this goal.

This Programme is composed of four projects as follows:

- 1) Coastal Fisheries Infrastructure Development Project (phase 1): Activities include rehabilitation and improvement of fish auction halls, formulation and implementation of fish landing infrastructure development plan. For the former activity, Pradeshiya Sabha/Urban Council would be a responsible agency together with DFAR. Local NGOs would also participate in the project to lubricate the activity. For the latter activity, DFAR should take responsibility under supervision of the MFARD, in particular, CFHC for the technical support with international donor assistance.
- 2) Coastal Fisheries Infrastructure Development Project (phase 2): Activities include implementation of fish landing infrastructure development plan and continuation of fish auction hall development. Implementing agencies would be the same as the phase 1.
- 3) Coastal Fishery Resources Management Project: Activities include inventory record of leading activities practiced by FCSes, full-scale integration and outreach of community-based fisheries management system, research on coastal fisheries resources, establishment of fisheries data base in DFAR and trial operation of co-management system. For the former two activities, FCSes headed by FCS Unions' Federation would takes responsibility with the experience of the pilot project (FC-1) under PDP Jaffna. For the latter three activities, DFAR would take responsibility with technical assistance of NARA and UOJ. NARA and UOJ have undertaken research on coastal fisheries resources, population dynamic and stock assessment in minor scale with their available fund at present.
- 4) New Model FCS Project: Activities include capacity development of FCS executives, institutional research and support for fisheries credit system, establishment of mutual assistant system for socially vulnerable members and rehabilitation of FCS's office building and equipment. FCS Unions

Federation would assume implementation of this project, and DFAR in Jaffna would take responsibility to allocate fund for the project under supervision of the MFARD. Since the MFARD promotes to organize Rural Fisheries Organization in the country, DFAR should coordinate to strengthen fishermen's organizations in the district by taking opportunities.

All these projects aim to strengthen the capacity of fisher's organizations in Jaffna District. The programme details are explained in Table 9-13.

**Table 9- 13: Programme for Strengthening Fishermen's Organization in Coastal Communities**

No	Project Title	Location	Project Description	Duration	Implementing Agency	Estimated Cost (LKR thousand)
1	Coastal Fisheries Infrastructure Development Project (Phase 1)	Jaffna District	<ul style="list-style-type: none"> <li>- Formulation of fish landing infrastructure development plan</li> <li>- Rehabilitation and improvement of fish auction halls</li> <li>- Rehabilitation of infrastructures in the fish landing site including resting place, fishing gear storage, toilet and shower room, water tank, fuel and ice storage and their supply systems</li> </ul>	5 years (2011-2016)	DFAR, Pradeshiya Sabha/urban council, CFHC (technical support) with international assistance and local NGO	450,000 (LKR 30,000 x 15 sites)
2	Coastal Fisheries Infrastructure Development Project (Phase 2)	Jaffna District	<ul style="list-style-type: none"> <li>- Continuation of rehabilitation and improvement of fish auction halls</li> <li>- Rehabilitation of infrastructures in the fish landing site including resting place, fishing gear storage, toilet and shower room, water tank, fuel and ice storage and their supply systems</li> </ul>	3 years (2007-2020)	DFAR, Pradeshiya Sabha/urban council, CFHC (technical support) with international assistance and local NGO	450,000 (LKR 30,000 x 15 sites)
3	Coastal Fishery Resources Management Project	Jaffna District	<ul style="list-style-type: none"> <li>- Inventory record of FCS best practices</li> <li>- Full-scale integration and promotion of community-based fisheries management system</li> <li>- Research on coastal fishery resources</li> <li>- Establishment of fisheries database in DFAR</li> <li>- Trial operation of a co-management system</li> </ul>	5 years (2011-2016)	DFAR with technical support of NARA and UOJ	250,000 (LKR 50,000 x 5 years)
4	New FCS Model Project	Jaffna District	<ul style="list-style-type: none"> <li>- Development of FCS executives and staff in terms of leadership, laws and regulation, and fishery household management</li> <li>- Institutional research and support for the fisheries credit system</li> <li>- Establishment of mutual assistant system for socially-disadvantaged members of FCS</li> <li>- Rehabilitation and reconstruction of office building and equipment</li> </ul>	5 years (2011-2016)	DFAR	350,000 (LKR 5,000 x 20 sites + LKR 50,000 x 5 years)
Total Estimated Cost						1,500,000

### **9.7.6 Recommendation for Implementation**

#### **(1) Joint work for fisheries co-management system**

The Coastal Fishery Resources Management Project in the Programme aims at the state that co-management system functions for coastal fisheries. Co-management system would be realized through the integration of two fisheries management systems; community-based fisheries management by FCSes and a top-down type fisheries management based on scientific research by DFAR with support of NARA under the MFARD. During implementation of the pilot project: FC-1 (Integration of Community-based Fisheries Management on District Level), DFAR coordinated to introduce the registration system for traditional stake net fisheries based on an initiative of FCS. And this joint work was effective in integrating various fishing rules through consensus among stakeholders. As this successful project amply demonstrates, the strong cooperation and good coordination among stakeholders, in particular, fishermen's organizations and DFAR would be very important for the project.

#### **(2) Land Issues**

For the Coastal Fisheries Infrastructure Development Project of the Programme, the Team recommends that, if the project begins indeed, DFAR should keep in close touch with related agencies such as, DS Office, Pradeshiya Sabha and Urban Council to clear land issues. Because the Team has learned that the issues of land ownership and land permission are difficult to deal with and it takes much time to clear the paperwork. Procedures also tend to change, requiring adequate leeway in project schedule.

#### **(3) Consideration for Social Inclusion**

The New FCS Model Project is expected to strengthen mutual assistant system for socially-disadvantaged members of FCSes. The Team recommends that the project should include components for social inclusion in fishery communities; examples are promotion of fisheries related livelihood measures, and institutional capacity development such as training in communication skills and group dynamics, etc. as the pilot project: FC-5 did.



Table 9- 14: Framework for Fisheries Development in Jaffna District

Category		Coastal Fisheries			Offshore Fisheries			Aquaculture		
Goal		Establishment of Sustainable System for Coastal Fisheries			Exploitation of Offshore Fishing Ground			Development of New Technology for Fish Production		
Issues	Time span	Immediate Issues (2011-2012)	Short-term Issues (2013-2016)	Mid-term Issues (2017-2020)	Immediate Issues (2011-2012)	Short-term Issues (2013-2016)	Mid-term Issues (2017-2020)	Immediate Issues (2011-2012)	Short-term Issues (2013-2016)	Mid-term Issues (2017-2020)
Livelihood Enhancement	Adequate Operational Supplies	• Inviting ice making plants	• Capacity of ice production at 150ton/day	• Capacity of ice production at 300ton/day		Infrastructure development for fuel and water supply to multi-day boats		Implementation of various trial for aquaculture project	• Continuation of aquaculture project • Establishment of shrimp hatchery	<a href="#">Establishment of seed production center</a>
	Optimum Utilization of Resources	• Introducing community-based fisheries management system • Awareness for fishermen on fishery resources management and conservation  Community-based Fisheries Management	• <a href="#">Outreach of community-based fisheries management</a> • <a href="#">Implementation of research on coastal fishery resources</a>	• Introducing co-management system based on coastal fishery resources assessment (Marine Protection Area and license system, etc.)		• Implementation of study on offshore fishery resources • Formulation of offshore resources development plan	• <a href="#">Establishment of fishing vessel monitoring system (VMS)</a> • Introduction of license system based on the fishery resources development plan.	• Study on seasonal variation of water bodies • Implementation of research on aquaculture trials	Research on marine fish breeding (sea bass, sea cucumber, sea horse, etc.)	
	Productivity Improvement	• Test operation of FAD • Outreach of safty operation technology • Introduction of improved fish processing  Reconstruction of Fisheries College	• Outreach of FAD • Outreach of improved fish processing • Formulation of coastal fishing ground development plan	• Implementation of coastal fishing ground development plan	• <a href="#">Introduction of multi-day boats</a> • Trial operation of FAD • Outreach of safty operation technology	• Outreach of FAD • <a href="#">Promotion for local production of multi-day boats</a>	• Tuna long line fishery development	• <a href="#">Implementation of various types of aquaculture project including seaweed</a>  Seaweed farming	• <a href="#">Continuation of various types of aquaculture operation</a> • <a href="#">Formulation of master plan for aquaculture development</a>  • Training on aquaculture for fish farmers	• Full-scale outreach of aquaculture technology to coastal fishers based on the master plan for aquaculture development
	Marketing Improvement	• <a href="#">Rehabilitation and improvement of fish auction hall</a> • Formulation of improvement plan for consumers market including for tourists • Promotion of local fish exporters  Construction of fish auction hall	• <a href="#">Continuation of rehabilitation and improvement of fish auction hall</a> • Implementation of improvement plan for consumers market including for tourists • Commencement of direct fish export from Jaffna • Establishment of ice plant	• Establishment of high-end oriented marketing strategy		Study on fish processing industry development	Inviting fish processing factories to Point Pedro.		Introducing seaweed for cosmetic and agriculture sectors	
	Infrastructure Improvement	• <a href="#">Development of fish landing sites</a> • <a href="#">Formulation of fishery infrastructure development plan such as water supply facilities, ice storage, fishermen's locker, access road, etc.</a> • Formulation of fishery infrastructure development plan for safty operation  Jetty rehabilitation	• <a href="#">Implementation of fishery infrastructure development plan such as water supply facilities, ice storage, fishermen's locker, access road, etc (Phase 1)</a> • Implementation of fishery infrastructure development plan for safty operation (Phase 1).	• Implementation of fishery infrastructure development plan such as water supply facilities, ice storage, fishermen's locker, access road, etc (Phase 2). • Implementation of fishery infrastructure development plan for safty operation (Phase 2).	• <a href="#">Formulation of fishing harbor development plan in Point Pedro and Myliddy</a>	• <a href="#">Construction of fishing harbor in Point Pedro and Myliddy</a>	• Formulation of fish processing industry complex development plan in Point Pedro harbor.		Formulation of improvement plan for natural environment in Jaffna lagoon	Implementation of improvement plan for natural environment in Jaffna lagoon
Institutional Development	Strengthening of Fishermen's Cooperative Societies	• Inventory record of leading activities practiced by FCSs. • <a href="#">Establishment of new FCS model</a> • <a href="#">Improvement of mutual assistant system for socially vulnerable members</a>  Various assistance for Strengthening of FCSs	• <a href="#">Initiating model project for the new FCSs</a> • Assisting to strengthen FCS network	• Full-scale project for strengthening the model FCSs.	Preparation to establish offshore fishery cooperative societies	• Establishment of offshore fishery cooperative societies	• Organizational strengthening of offshore fisheries cooperative societies.	• <a href="#">Involvement of socially vulnerable members to aquaculture activities</a> • Establishment of new FCS model for aquaculture development  Various assistance to strengthen FCSes	• Initiating FCS strengthening project as aquaculture development model	• Full-scale implementation of FCS strengthening project as aquaculture development model
	Strengthening of District Level Administration	• Learning and reviewing fishery statistic system. • <a href="#">Establishment of fisheries data base in DFAR</a>	• Introduction of new fishery statistic system based on internet. • Training of capacity building for DFAR officer • Strengthening of Department of Fisheries of University of Jaffna	• Practical use of fishery statistics to fishery management system.	• Study to introduce fishing vessel monitoring system (VMS)	• Feedback to VMS		• Acquiring basic aquaculture knowledge • Strengthening of Department of Fisheries, University of Jaffna • Strengthening of aquaculture curriculum in College of Fisheries • Allocation of NAQDA staff	• Training to aquaculture officers of NAQDA in Jaffna • Establishment of NAQDA and NARA Regional Center in Jaffna • Introducing new scholarship schemes for expert • Formulation of development plan for Department of Fisheries, University of Jaffna	• Capacity building of seed production technicians • Establishment of Faculty of Fisheries in Unniversity of Jaffna including department of aquaculture
	Strengthening of National Level Administration				• Study to introduce fishing vessel monitoring system (VMS)	• Introduction of VMS	• Establishment of VMS			

\* Red color with underline: Critical actions

**Table 9- 15: Development Road Map 5 Sustainable System for Coastal Fisheries**

Goal	Present Status (Description)	Present Status (Indicator)	2011		2012		2013		2014		2015		2016		2017		2018		2019		2020																																																																																																																																																		
			J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
I.. Sustainable System for Coastal Fishery Development																																																																																																																																																																							
1. Livelihood enhancement																																																																																																																																																																							
1) Adequate operational supplies			Inviting ice making plants				Ice production capacity:150ton/day				Ice production capacity: 300ton/day																																																																																																																																																												
2) Optimum utilization of resources			FC-1	Introduction of community-based fisheries management (DFAR)			Outreach of community-based fisheries management (DFAR)				Implementantation of reearch on coastal fishery resources assessment (DFAR,NARA)				Introduction of co-management system for coastal fisheries resources (DFAR)																																																																																																																																																								
				Awareness for fishermen about fishery resources management and concervation (DFAR)																																																																																																																																																																			
3) Productivity improvement			FC-4	Test operation of FAD (NARA)			Outreach of FAD (NARA, DFAR)																																																																																																																																																																
			FC-6	Promotion of safety operation Technology (DFAR, NARA)			Formulation of coastal fishing ground development plan (including artificial reef development and stock enhancement) (DFAR, NARA)																																																																																																																																																																
				Improvement of fish processing (PARCIC)			Outreach of improved fish processing (DFAR, COFNE)								Implementation of coastal fishing ground development plan (DFAR, NARA)																																																																																																																																																								
4) Marketing improvement			FC-5	Rehabilitation and improvement of fish auction hall (PS/UC, DFAR)			Continuation of Rehabilitation and improvement of fish auction hall (PS/UC, DFAR)																																																																																																																																																																
				Promotion of local fish exporters (DFAR)			Commencement of direct fish exportation from Jaffna (DFAR)																																																																																																																																																																
				Formulation of consumers market development plan including for tourist (PS/UC)			Implementation of improvement plan for consumers fish market (including for tourists) (PS/UC)								Establishment of high-end marketing strategy for fish products (DFAR, NARA)																																																																																																																																																								
5) Infrastructure improvement			Batch 1(Jetty)	Formulation of fisheries infrastructure development plan for safety operation (DFAR, CFHC)			Implementation of fisheries infrastructure development plan for safety operation (phase 1) (DFAR, CFHC)								Implementation of fisheries infrastructure development plan for safety operation (phase 2 ) (DFAR, CFHC)																																																																																																																																																								
			FC-5	Formulation of fish landing infrastructure development plan including water, ice, fuel supply, fishermen's locker and access road (DFAR, CFHC)			Implementation of fish landing infrastructure development plan including water, ice, fuel supply, fishermen's locker and access road (Phase 1) (DFAR, CFHC)								Implementation of fish landing infrastructure development plan including water, ice, fuel supply, fishermen's locker and access road (Phase2) (DFAR, CFHC)																																																																																																																																																								
				Development of fish landing sites (DFAR, CFHC)																																																																																																																																																																			
2. Institutional strengthening																																																																																																																																																																							
1) Strengthening of Fishermen's Cooperative Societies			FC-1	Inventory record of leading activities practiced by FCSes (DFAR)			Assisting to strengthen FCS network (DFAR)								Full-scale project for strengthening the model FCSes (DFAR)																																																																																																																																																								
				Improvement of mutual assistant system for socially vulnerable members of FCSes (DFAR)			Initiating model projects for the new FCS (DFAR)																																																																																																																																																																
				Establishment of new FCS model (DFAR)																																																																																																																																																																			
2) Strengthening of District level administration				Learning and reviewing the present fisheries statistic system (DFAR)			Introduction of new fishery statistic system based on internet (DFAR)								Practical use of fishery statistics to fishery management system (DFAR)																																																																																																																																																								
				Establishment of fisheries data base in DFAR (DFAR)			Training of capacity building for DFAR Officer (MFARD)																																																																																																																																																																
							Strengthening Department of Fisheries, UOJ (UOJ)																																																																																																																																																																
3) Strengthening of national level administration																																																																																																																																																																							

## 9.8 Road Map for Offshore Fisheries Development

### 9.8.1 Important Actions and Development Framework

This section describes the actions required for achieving offshore fisheries development in Jaffna. The important steps and terms related to this category are described in Table 9-14.

### 9.8.2 Required Actions

#### (1) Required actions for livelihood enhancement

##### 1. Adequate operational supplies

Infrastructure development including those for fishing harbours must be consolidated at convenient sites to enable multi-day boats to moor and get necessary operational supplies such as fuel, ice, water, bait, and food. The following concrete action is required to achieve adequate and accessible supplies:

- Develop infrastructure for fuel and water supplies for multi-day boats

##### 2. Optimum utilization of resources

In order to achieve an optimum utilization of offshore fisheries resources, the formulation of an offshore development plan based on an assessment of resources is indispensable and involves the introduction of both a license system and a fishing vessel monitoring system. The following concrete actions are required to achieve an optimum utilization of resources:

- Study on offshore fishery resources
- Formulate an offshore fisheries resources development plan through resources assessment
- Introduce a license system based on the fisheries resources development plan
- Launch a fishing vessel monitoring system

##### 3. Productivity improvement

As of July 2011, fishermen in the district have 23 multi-day boats. DFAR in Jaffna has received an approval from the MFARD to issue a bank loan of LKR 12 million for the purchasing of a multi-day boat, which is urgently needed in the district. The promotion of local multi-day boat production is another priority in the district. The following concrete actions are required to improve the productivity:

- Introduce multi-day boats<sup>4</sup>
- Promote local production of multi-day boats
- Try operation and promotion of FAD in offshore fishing grounds
- Develop tuna long-line fishing
- Promote safety operation technologies

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<sup>4</sup> The first multi-day boat managed by FCS Unions Federation was launched on 17 November 2010. After that the number of multi-day boat has increased rapidly with 23 numbers as of July 2011. The Team discussed the issue during this period, thus the meaning of “introduce multi-day boats” has also changed from introduce to “increase multi-day boat”.

#### 4. Marketing improvement

Once the district fishery production increases thanks to the successful promotion of offshore fishing grounds, it will be necessary to introduce industrial fish processing. If a fishing harbour for offshore fisheries is constructed in Point Pedro, a fish processing industry complex should also be planned at the same site. The following concrete actions are required to improve marketing:

- Promote local fish exporters
- Research on fish processing industry development
- Invite fish processing factories to Point Pedro.

#### 5. Infrastructure improvement

Infrastructure development including those of fishing harbours must be established at convenient sites to enable multi-day boats to moor and get necessary operational supplies. Point Pedro is one of the best sites in the district for developing this infrastructure. Based on this, the Team has implemented a pre-feasibility study for the construction of a fishing harbour in Point Pedro. The following concrete actions are required for infrastructure improvement:

- Formulate and implement a fishing harbour development plan in Point Pedro
- Formulate a development plan for a fish processing industry complex in an offshore fishing harbour

### (2) Required actions for institutional development

#### 1. Strengthening of FCS

A new FCS model needs to be established based on the needs of fishermen who work in the offshore fisheries subsector. The following concrete action is required to strengthen FCS in offshore fisheries development:

- Prepare, establish, and strengthen offshore FCSes

#### 2. Strengthening of district-level administration

VMS is indispensable for operational safety in offshore or deep-sea fishing grounds. This initiative should be introduced by DFAR with the assistance of the MFARD. The following concrete actions are required to implement this monitoring system:

- Research on how to introduce VMS
- Gather feedback on VMS

#### 3. Strengthening of national-level administration

The MFARD should promote the introduction of VMS in Jaffna District corresponding to the district's offshore fisheries development. The following concrete action is required to achieve this goal:

- Launch VMS

### **9.8.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be allocated realistic timelines. Table 9-17 shows the proposed timelines for the actions in the development category.

### **9.8.4 Critical Actions**

Among the actions discussed in the development framework are those more critical for achieving our goals. The following critical actions have been identified by the Team from the discussions with stakeholders during the First and Second Development Workshops in Jaffna and on other occasions:

- Introduce multi-day boats;
- Formulate a fishing harbour development plan
- Construct a fishing harbour in Point Pedro and Myliddy based on the fishing harbour development plan
- Promote local production of multi-day boats
- Launch VMS

### **9.8.5 Programmes and Projects for Critical Actions**

#### The offshore Fisheries Development Programme

There were 13 multi-day boats as of the First Workshop which was held on the 19 February 2011. This number increased to 23 boats after five months by the time of the Second Workshop which was held on 15 July 2011. The 10 new boat owners are fishermen in the district who purchased reconditioned boats from the south of the country. One of boatyard owners, who also attended both workshops, started building 28-foot one-day boats in January 2011 and consequently 32-foot multi-day boats during this same year. By the time of the second workshop, he had received 13 orders for 36-foot multi-day boats. These increase in demand for boats reflect changes in the district's movement toward offshore fishing grounds.

The Offshore Fisheries Development Programme is composed of the following four projects: Fishing Harbour Development Project; Multi-day Boat Development Project; Offshore Fisheries and Resources Management Project (Phase 1); and Offshore Fisheries and Resources Management Project (Phase 2) as follows:

- 1) Fishing Harbour Development Project: Activities include formulation of fishing harbour development plan, construction of a fishing harbour and several anchorages. For both activities, CFHC and DFAR in Jaffna would be responsible agencies under the supervision of the MFARD with support of international assistance.
- 2) Multi-day Boat Development Project: Activities include technical assistance for local boatyards, capacity building of local boat-building technicians, construction of public slipways, and foundation of institutional subsidy for local production of multi-day boats. For the former two activities, local boatyard owners would take responsibilities with technical support of Cey-nor Foundation Limited. For the latter two activities, DFAR in Jaffna would take responsibility with supervision of the MFARD.
- 3) Offshore Fisheries and Resources Management Project (Phase1): Activities include research on

offshore fisheries resources, stock assessment for fisheries resources, and formulation of offshore fishery resources development plan. NARA would take responsibility for these activities with administrative support of DFAR in Jaffna.

- 4) Offshore Fisheries and Resources Management Project (Phase 2): Activities include introduction of fishery license system, establishment of VMS and strengthening of FCSes for offshore fisheries based on the achievement of the Phase1. DFAR in Jaffna would take initiative to implement this project under the supervision of MFARD with technical support of NARA.

Details of the programme are presented in Table 9- 16.

**Table 9- 16: The Offshore Fisheries Development Programme**

No.	Project Title	Location	Project Description	Duration	Implementing Agency	Estimated Cost (LKR thousand)
1	Fishing Harbour Development Project	Point Pedro	- Formulation of fishing harbour development plan in Point Pedro - Construction of Point Pedro Fishing Harbour (1 site) - Construction of fishery anchorages (4 sites)	5 years (2011-2016)	CFHC, DFAR with support of international assistance.	2,000,000 (LKR 1,000,000 x 1 site + LKR 250,000 x 4 sites )
2	Multi-day Boat Development Project	Jaffna District	- Technical assistance for local boatyards to build multi-day boats - Capacity building of boat technicians - Construction of public slipway for building multi-day boats - Foundation of institutional subsidy for local production of multi-day boats	5 years (2011-2016)	DFAR, Cey-nor Foundation Limited	500,000 (LKR 100,000 x 5 years)
3	Offshore Fisheries and Resources Management Project (Phase 1)	Jaffna District	- Research on offshore fishery resources - Stock assessment for fishery resources - Formulation of offshore fishery resources development plan	3 years (2013-2016)	DFAR, NARA	300,000 (LKR 100,000 x 3 years)
4	Offshore Fisheries and Resources Management Project (Phase 2)	Jaffna District	- Introduction of fishery license system - Establishment of VMS - Organizational strengthening of offshore fisheries cooperative societies	3 years (2017-2020)	DFAR, NARA	300,000 (LKR 100,000 x 3 years)
Total Estimated Cost						3,100,000

### 9.8.6 Recommendation for Implementation

- (1) Riding a wave without delay

The current drive of local fishermen forwarding to offshore fisheries exploitation is so powerful that the Team recommends commencing the Offshore Fisheries Development Programme as early as possible without hindering this drive.

- (2) Promotion of Private Sector

Active fishermen and boatyard owners in the district are very eager to act for offshore fisheries development at present. One of boatyard owners emphasized during the First Workshop for Development in Jaffna District that boatyards in the district needed technical and financial assistance for building multi-day boats. The Team considers that promotion of the private sector by means of technical, financial and institutional assistance is the key to the Multi-day Boat Development Project.

### (3) Strengthening of Cooperation among International Donors

Many foreign donors are interested in the move to offshore fishing, e.g. KOICA expressed their interest in fishing harbour development in Myliddy; DANIDA is developing a plan for Gurunagar fishing harbour in Jaffna City; and the Indian government is said to be also interested in fisheries sector development in Jaffna District. PDP Jaffna has conducted pre-feasibility study for construction of a fishing harbour in Point Pedro. Hence, it is important to strengthen cooperation and coordination among these donors.

## **Result of Pre-Feasibility Study for Construction of Fishing Harbour in Point Pedro**

### **Selection of Sites**

Technical, social and fishery industrial assessments were carried out to select the best possible locations for fishery infrastructure development in Point Pedro. Various aspects such as coastal environment, harbor engineering, number of active fishermen, fishing families, fishing fleet, current fish catch, proximity to other landing sites, land availability, etc were considered in the assessment. The details of the fishing fleet and fish catch in the 10 landing sites in Point Pedro are given in the following table.

	<b>Landing Site</b>	<b>IMUL</b>	<b>IDAY</b>	<b>OFRPB</b>	<b>Other</b>	<b>Total</b>	<b>Fish Production (MT)</b>
1	Thondamanaru	-	-	20	10	30	133
2	Athikovilady	-	-	100	170	270	1,153
3	Valveddithurai	9	18	42	61	130	628
4	Polikandy West	1	-	25	22	48	233
5	Polikandy East	-	-	46	47	93	440
6	Sakkoddai	-	-	35	54	89	482
7	Imparsiddy	5	5	40	65	115	425
8	Suppermadam	4	5	46	45	100	266
9	Koddady	-	2	64	49	115	464
10	Munai	-	5	177	142	324	1,279

In view of the above consideration in the technical pre-feasibility, Imparsiddy has been selected as the most suitable location for the development of a fishing harbour. The site is located besides the main road and no land acquisition is required for access. The development would include both marine structures and shore facilities. As in many other landing sites in the area, the extent of land available is limited for the development of shore facilities and reclamation of the beach area may need to be carried out. Thondamanaru could be considered as an alternate location in the event of any technical concern related to the development in Imparsiddy. An estimate of LKR 1,000 million for a fishing harbour can be indicated based on the estimates for recently proposed similar developments in the country.

Munai, Polikandy East, Athikovilady and Valveddithurai could be recommended for development as fishery anchorages. The developments would mainly include access channel dredging, basin dredging, provision of breakwaters, retaining walls, shore facilities and beacon lights. An estimate of LKR 250 million for a fishery anchorage can be indicated.

Koddady, Suppermadam, Sakkodai, Polikandy West and Thondamanaru could be recommended for development as fishery landing sites. The developments would mainly include access channel dredging, basin dredging, provision of shore facilities and beacon lights. Approximately LKR 30 million for a fishery landing site development can be indicated.

### **Project Rationale and Justification**

Needs assessments carried out in Point Pedro registered a strong demand for a harbor facility that the fishermen are eager to invest on bigger boats provided the facilities are made available by the government assistance programmes. A field survey of fishery activities at Point Pedro revealed the important role of fisheries in the project area. Over 15,000 individuals from more than 3,200 families are involved in fishing and fishery related activities. Survey work and fish production data indicated that, in Point Pedro, the fish production amounts to a yearly aggregate of approximately 6,200 MT. An estimated 95% of the total catch is sold at retail/wholesale markets and the remainder (5%) is used for home consumption.

A fishing harbor of the proposed nature could accommodate approximately 300-400 multi-day boats. Currently (May 2011) there are 19 multi-day boats in the Point Pedro area. It could be assumed that, three years after construction, the number of boats could be increased by additional 200. This will result in total fish catch of 8,680 MT/year. An estimated 95% of the total catch could be sold at retail/wholesale markets at a rate of LKR 300/kg. The estimated gross annual value of fish equals annual market sales of approximately LKR 1,732 million plus the value of fish consumed at home of LKR 91 million, amounting to approximately LKR 1,823 million per year. This has been derived by taking 70% of fish production valued at wholesale price.

The survey evidence indicates that monetary costs of fishing are relatively uniform among fishers and roughly equals 40% of the value of the production. Deducting 40% of the value of fish production at Point Pedro to cover production costs from above estimate, the net economic value of fish production is LKR 1,039 million per year. The estimated number of 200 multi-day boats will provide 960 direct employment and 288 indirect employment opportunities.

Considering the socio-economic status of the fishing community in Point Pedro arising from the restrictions and limitations for full scale operation of the boats in the existing fish landing sites, the proposal for development of a fishing harbour is justified. The establishment of a fishing harbour, four fishery anchorages and five fishery landing sites could be recommended.



Table 9- 17 Development Road Map 6 Offshore Fisheries Development

Goal	Objective	Present Status (Description)	Present Status (Indicator)	2011			2012			2013			2014			2015			2016			2017			2018			2019			2020																																																																												
				J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
II. Offshore Fishing Ground Exploitation																																																																																																											
1. Livelihood enhancement																																																																																																											
	1) Adequate operational supplies																											Infrastructure development for fuel and water supply to multi-day boat (CFHC, DFAR)																																																																															
	2) Optimum utilization of resources																											Implementation of study on offshore fishery resources (NARA)			Introduction of license fishery system based on fishery resources development plan (DFAR, NARA)			Establishment of fishing vessel monitoring system (VMS) for offshore fisheries (NARA, DFAR)																																																																									
	3) Productivity improvement			Introduction of multi-day boats (including institutional study on credit accessibility for introducing multi-day boats) (DFAR, Cey-Nor)			Promotion for local production of multi-day boat (Cey-Nor, DFAR)			Outreach of FAD (NARA, DFAR)			Development of tuna longline fishery (DFAR)																																																																																														
				Trial operation of FAD (NARA)			Outreach of FAD (NARA, DFAR)																																																																																																				
				FC-6			Outreach of safty fishery operation technology (DFAR, COFNE)																																																																																																				
	4) Marketing improvement																											Study on fish processing industry development (DFAR)			Inviting fish processing industries to Point Pedro (DFAR)																																																																												
	5) Infrastructure improvement			Pre-FS for Harbor			Formulation of fishing harbor development plan in Point Pedro and Myliddy (CFHC, DFAR)			Construction of fishing harbor in Point Pedro and Myliddy (CFHC, DFAR)			Formulation of fish processing industry complex Development plan in Point Pedro fishing harbor (CFHC, DFAR)																																																																																														
2. Institutional strengthening																																																																																																											
	1) Strengthening of Fishermen's Cooperative Societies			Preparation to establish offshore fisheries cooperative society (DFAR)			Establishment of offshore fisheries cooperative societies (DFAR)			Organizational strengthening of offshore fisheries cooperative societies (DFAR)																																																																																																	
	2) Strengthening of district level administration			Study to introduce fishing vessel monitoring system (VMS) (DFAR)			Feed-back to vessel monitoring system (DFAR)																																																																																																				
	3) Strengthening of national level administration			Study to introduce fishing vessel monitoring system (VMS) (MFARD)			Introduction of fishing vessel monitoring system in the country (MFARD)			Establishment of fishing vessel monitoring system in the country (MFARD)																																																																																																	

## **9.9 Road Map for Aquaculture Development**

### **9.9.1 Important Actions and Development Framework**

This section describes the actions required for achieving aquaculture development in Jaffna. The important steps and terms related to this category are described in Table 9-14.

### **9.9.2 Required Actions**

#### (1) Required actions for livelihood enhancement

##### 1. Adequate operational supplies

At present, aquaculture development in Jaffna District is still in the initial stages and thus, trial and error of various initiatives is indispensable for success. Several seed production centers are needed to maintain a stable and adequate supply of seeds for potential species in the short- to mid-term. The following concrete actions are required to maintain an adequate and stable supply for aquaculture development:

- Implement various trials for aquaculture projects
- Establish seed production centers for production of potential fish seeds for shrimp, sea cucumber, milkfish, and other species

##### 2. Optimum utilization of resources

The pilot project of seaweed farming faced difficulties from stunted growth due to high-temperature waters and high salinity. To overcome these problems in the future, it is important to understand the seasonal variation in the bodies of water where aquaculture trials are currently being implemented and to conduct research on marine fish breeding for potential species. The following concrete actions are required to achieve an optimum utilization of resources:

- Research on aquaculture trials
- Research on the seasonal variation of the relevant bodies of water
- Research on marine fish breeding

##### 3. Productivity improvement

The formulation of a master plan for aquaculture development involving trial operations for various potential species is needed. Comprehensive training on aquaculture technology would facilitate the promotion of aquaculture to fish farmers in Jaffna District. The following concrete actions are required for productivity improvement:

- Implement trial operations for various potential species for aquaculture development
- Formulate a master plan for aquaculture development
- Train fish farmers on aquaculture
- Promote aquaculture technology to coastal fish farmers based on the master plan for aquaculture development

#### 4. Marketing improvement

Market promotion is one of the most important factors for successful seaweed farming, and as such, it is necessary to establish a purchasing system for seaweed produced in Jaffna District. Confectionaries such as Ceylon Biscuit Limited (CBL) use powdered seaweed as a binding agent. The cosmetic and agriculture sectors represent other potential markets to pursue.<sup>5</sup> The following concrete action is required to improve the marketing of seaweed:

- Promote seaweed use in the cosmetic and agriculture sectors

#### 5. Infrastructure improvement

According to a report by the NARA, most of the brackish water sources in Jaffna District are unsuitable for aquaculture owing to high salinity. Causeways constructed across the lagoon have cut it off from the sea resulting in considerable water evaporation and consequently high salinity levels in the lagoon area. Improving the current state of the Jaffna Lagoon is a huge priority in aquaculture development in the future. The following concrete action is required to improve the lagoon:

- Formulate and implement an improvement plan for environment of Jaffna Lagoon

### (2) Required actions for institutional development

#### 1. Strengthening of FCS

Strengthening of FCS is required in the aquaculture development model which includes improving the mutual assistant system for the socially-disadvantaged members. The following concrete actions are required to strengthen FCS in aquaculture development:

- Strengthen the mutual assistant system for socially vulnerable members in aquaculture development
- Establish a new FCS model for aquaculture development
- Implement FCSes strengthening project through the new aquaculture development model

#### 2. Strengthening of district-level administration

The NAQDA, under the MFARD, works to develop inland fisheries and aquaculture throughout the country but has neither staff nor a representative office in Jaffna District. Neither does NARA, which conducts scientific research in the fisheries and aquaculture fields. Strengthening of the capabilities of the UOJ and the College of Fisheries is therefore necessary. The following concrete actions are required to strengthen the research capability in the district:

- Assign NAQDA and NARA staff in Jaffna
- Open NAQDA and NARA representative offices in Jaffna
- Strengthen Department of Fisheries at UOJ
- Strengthen the aquaculture curriculum in the College of Fisheries
- Educate technicians in seed production

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<sup>5</sup> Carragenan, an ingredient abstracted from the seaweed, is used for a quality stabilizer in food, feed, medicine, cosmetics, agricultural chemicals, paint, and adhesive.

### **9.9.3 Implementing Timelines**

Before creating detailed project plans, the individual actions listed above should be allocated realistic timelines. Tables 9-19 shows the proposed timelines for the actions in this development category.

### **9.9.4 Critical Actions**

The following critical actions have been identified by the Team from the discussions with stakeholders during the First and Second Development Workshops in Jaffna and on other occasions:

- Implement various types of aquaculture projects
- Strengthen the mutual assistant system of FCS for socially-disadvantaged members in aquaculture development
- Continue various types of aquaculture operations
- Formulate a master plan for aquaculture development
- Establish fish seed production centers

### **9.9.5 Programmes and Projects for Critical Actions**

Through discussions the Team had with related agencies and stakeholders during the First and Second Development Workshops for the Fisheries Sector, we have formulated programmes and projects for those critical actions.

#### The Aquaculture Development Programme

Jaffna District is still in the initial stages of aquaculture development and thus, numerous trials are required to confirm the feasibility of various potential species in the district. Although the pilot projects on seaweed and sea cucumber farming produced encouraging results, more time is needed to confirm these species' feasibilities.

The Aquaculture Development Programme is composed of the following three projects: Aquaculture Technology Development Project (Phase1), Aquaculture Technology Development Project (Phase2), and Development Project for UOJ. The implementing agencies for these projects should be the NAQDA and NARA, except for the Development Project for UOJ which will be headed by UOJ. Although agencies such as the NAQDA and NARA currently do not have representative offices nor technical staff in Jaffna District, based on information gathered from the Second Workshop, the NARA may establish a sea cucumber hatchery in the district if the pilot project on sea cucumber farming produces encouraging results. In addition, DFAR in Jaffna has requested the NAQDA to establish an office in the district. These developments will help facilitate the implementation of the Aquaculture Development Programme explained as under.

- 1) Aquaculture Technology Development Project (Phase1): Activities include implementation of various aquaculture trials, formulation of aquaculture development plan, formulation and

implementation of social inclusion measures for socially vulnerable people, and technical capacity building for fish farmers in the district. NAQDA and NARA should take responsibility for implementing this project, hence opening of the both offices is highly appreciated as early as possible.

- 2) Aquaculture Technology Development Project (Phase2): Activities include full-scale outreach of aquaculture technology to fish farmers, and establishment and management of fish seed production center which functions for fish seed production and technical training. NAQDA and NARA should take responsibilities for implementing this project, with support of international assistance.
- 3) Development Project for UOJ: Activities include construction of aquaculture laboratory in UOJ and capacity development of teaching staff in UOJ. UOJ would takes responsibility for this project.

Details of the programme are presented in Table 9- 18.

**Table 9- 18: The Aquaculture Development Programme**

No.	Project Title	Location	Project Description	Duration	Implementing Agency	Estimated Cost (LKR thousand)
1	Aquaculture Technology Development Project (Phase 1)	Jaffna District	<ul style="list-style-type: none"> <li>- Implementation of various types of aquaculture trials</li> <li>- Technical capacity building for fish farmers in the district</li> <li>- Outreach of aquaculture technology to fish farmers in the district</li> <li>- Formulation and implementation of social inclusion measures for socially-disadvantaged people in the aquaculture project</li> <li>- Formulation of aquaculture development plan in Jaffna</li> <li>- Formulation of development plan for Department of Fisheries at UOJ</li> </ul>	5 years (2011-2016)	NAQDA, NARA	500,000 (LKR 100,000 x 5 years)
2	Aquaculture Technology Development Project (Phase 2)	Jaffna District	<ul style="list-style-type: none"> <li>- Full-scale promotion of aquaculture technology to fish farmers in the district</li> <li>- Establishment and management of an seed production center for fish seed production and technical training</li> <li>- Implementation of community-based aquaculture pilot projects</li> </ul>	3 years (2017-2020)	NAQDA, NARA with international assistance	500,000
3	Development Project for UOJ	Town of Jaffna	<ul style="list-style-type: none"> <li>- Construction of laboratory for aquaculture research in UOJ</li> <li>- Capacity development of teaching staff and research workers in the aquaculture field at UOJ</li> </ul>	2 years (2017-2019)	UOJ	200,000
Total Estimated Cost						1,200,000

## **9.9.6 Recommendation for Implementation**

### **(1) Market consideration for aquaculture development**

Market consideration is one of very important issues to succeed in developing aquaculture in Jaffna District. Sea cucumber farming is relatively easier in this aspect because its marketing channel has been well established. Whereas in the case of seaweed, which it is also an international commodity with big demand in the markets, this kind of marketing chain has yet to be established in Sri Lanka. It is recommended to make the linkage with domestic confectionaries such as Ceylon Biscuit Limited (CBL) and exporters.

### **(2) Strengthening of Administrative Support for Aquaculture Development**

The main implementing agencies for the Programme should be the NAQDA and NARA. However, these two agencies currently do not have representative offices nor technical staff assigned in Jaffna District. The NARA may establish a sea cucumber hatchery in the district if the pilot project on sea cucumber farming produces encouraging results, and DFAR in Jaffna has requested the NAQDA to establish an office in the district. Strengthening of these supporters' presence is indispensable to realize aquaculture developments in the district.

### **(3) Consideration to Communities**

When an aquaculture project is planned for enhancing income generation in some communities, it is recommended to assist the same communities with several means of income generation or to select communities which are receiving other assistance from donor agencies or NGOs. This is because aquaculture trials take time to gain income from production.

Table 9- 19: Development Road Map 7 Aquaculture Development

Goal	Objective	Present Status (Description)	Present Status (Indicator)	2011												2012												2013												2014												2015												2016												2017												2018												2019												2020																																																																							
				J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D																																																
III.. Aquaculture Ddevelopment																																																																																																																																																																																							
1. Livelihood enhancement																																																																																																																																																																																							
	1) Adequate operational supplies			Implementation of various trial for aquaculture project (NAQDA, NARA)												Continuation of aquaculture project (NAQDA, NARA) Establishment of shrimp hatchery (NARA, NAQDA)												Establishment of fish seed production center (NARA, NAQDA)																																																																																																																																																											
	2) Optimum utilization of resources			Study on seasonal variation of water bodies (NARA) Implementation of research on aquaculture trial (NARA)												Research on marine fish breeding (sea bass, sea cucumber, sea hourse) (NARA)																																																																																																																																																																							
	3) Productivity improvement			FC-2 FC-3 Implementation of various types of aquaculture project (NAQDA, NARA)												Continuation of various types of aquaculture operation (NAQDA, NARA) Training on aquaculture for fishers (NAQDA, NARA) Formulation of master plan for aquaculture development in Jaffna District (NAQDA, NARA)												Full-scale outreach of aquaculture technology to coastal fishers based on the master plan for aquaculture development (NAQDA, NARA)																																																																																																																																																											
	4) Marketing improvement															Introducing seaweed for cosmetic and agriculture sectors (NARA, NAQDA)																																																																																																																																																																							
	5) Infrastructure improvement															Formulation of environmental improvement plan for Jaffna Lagoon (RDA, NARA, NAQDA)												Implementation of environmental improvement plan for the Jaffna Lagoon (RDA, NARA, NAQDA)																																																																																																																																																											
2. Institutional strengthening																																																																																																																																																																																							
	1) Strengthening of Fishermen's Cooperative Societies			FC-2 FC-3 Establishment of new FCS model for aquaculture development (DFAR) Involvement of socially vulnerable members to aquaculture activities (DFAR)												Initiating FCS strengthening project as aquaculture development model (DFAR)												Full-scale Implementation of FCS strengthening project as aquaculture development model (DFAR)																																																																																																																																																											
	2) Strengthening of district level administration			FC-6 Accumulation of basic knowledge of aquaculture (NARA, NAQDA) Strengthening of aquaculture curriculum for College of Fisheries (COFNE) Strengthening of Department of Fisheries, University of Jaffna (UOJ) Allocation of NAQDA staff in Jaffna (NAQDA)												Establishment of NAQDA and NARA Regional Center in Jaffna (NAQDA, NARA) Formulation of development plan for Department of Fsheries, University of Jaffna (UOJ) Training on aquaculture officers in NAQDA (NAQDA, NARA)												Allocation and training of fish seed production technicians (NAQDA, NARA) Establishment of Faculty of Fisheries, University of Jaffna including Department of Aquaculture (UOJ)																																																																																																																																																											
	3) Strengthening of national level administration																																																																																																																																																																																						

**9.10 Road Map for Institutional development**

**9.10.1 Required Actions**

Table 9- 20 shows the required actions for institutional development in the immediate, short-term and mid-term stages.

**Table 9- 20: Actions to Promote Community Approach**

Stage	Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
Approach	Adoption of community approach for all projects to improve living standard of communities		
Actions	Assess CBOs capacity to select project components to meet their capacity and condition		
	Assure of including community mobilization and capacity development in the project		
	Ensure community driven approach / process approach / bottom up process		
	Promote diversification of CBO activities		
Approach	Improvement of set -up to provide services for community approach		
Actions	Assess on availability of human resources		Establish mechanism to promote community approach with the government ; - human resource development - assistance of village development projects
	Make aware on importance of community approach for stakeholders, especially management officers		
	Train field level officers in the community approach		

1) Assuring the adoption of the community approach

a) Assessing CBO capacity

The Team observe different development stages in different areas in Jaffna, reflecting the complicated result of the conflict. While there are villages in which people have recently resettled, other villages were not badly affected by the latest conflict. Besides, most communities have mixed development stages; some IDPs are placed among host communities. In addition, different socioeconomic groups live in neighboring areas. The assessment of communities’ condition will be useful in selecting suitable project components for the target communities, promoting social inclusion in the selection of beneficiaries.

b) Assuring the inclusion of community mobilization and capacity development

Community mobilization is one of the most important activities for recovering mutual trust among community members as it would encourage their active participation in village development activities. Field level officers are expected to visit communities frequently to understand their issues and potentials. CBOs are motivated by the support of officials who understand the communities well.

Capacity development training is also essential to maintain the quality of project. The training period should be considered such that the communities can use the skills learned in project activities as soon as possible. Another important requirement is technical guidance throughout the project term. For example, training along with close monitoring and supervision of the financial recording helps develop financial management.



c) Ensuring the community-driven approach/process approach/bottom-up process

- Community-driven approach

Project components should be prepared on the basis of the real needs of communities, which are identified through community participatory needs assessment. The awareness of CBO responsibility in project implementation is also essential.

- Process approach

Process approach is a method to facilitate communities by utilizing issues occurred during project cycle as an opportunity for transforming of CBOs. Communities would be strengthened by attending issues. Communities are strengthened at every stage in the project. Service providers are required to monitor the project progress closely and provide timely support. Community participatory monitoring is recommended to promote the process approach, since communities and service providers can together identify issues in the early stages.

- Bottom-up process

Promotion of the bottom-up process is essential in order to mobilize community participation in CBO activities, especially in decision making. This process encourages not only leaders but also other members to take responsibility for project implementation through activities such as providing labour contribution, expressing ideas, and paying monthly subscription.

d) Promoting the diversification of CBO activities

CBO performance varies with the needs of different villages. For example, WRDS can accommodate not only livelihood activities but also health and education programmes for children. If service providers help CBOs determine needs that can be fulfilled by utilizing community resources and national services, the CBOs will get confidence to work with their own resources.

2) Improving the setup to provide services for the community approach

a) Assessing human resources

Assessment of available human resources and their capacity would be the first step to improve setup and provide services for the community approach. Field level officers from various departments and GNs<sup>6</sup> are considered as human resources that promote the community approach.

b) Fostering the awareness of the importance of the community approach among stakeholders

Although the community approach is common in Sri Lanka, CBO activities deteriorated during the conflict period and the top-down mechanism was strengthened in Jaffna. For village rehabilitation through CBOs, awareness of the importance of the community approach is necessary among stakeholders, especially among management officers.

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<sup>6</sup> RDS and WRDS are supported not only by RDOs but also by GNs, who are village-level administration officers. RDOs are assigned at the divisional level and GNs, at the village division level. Therefore, GNs are the officers closest to the communities.

c) Providing training for field level staff

Basic training in the community approach for field level officers to facilitate CBOs is one of the short-term development needs. Training in community approach methodologies such as PRA<sup>7</sup> and CAP<sup>8</sup> would be useful for further improving the capacity of these officers. Practical training, including field training, will be useful to develop the practicability of the officers.

d) Providing the mechanisms to promote the community approach

In the midterm development stage, the government sector would strengthen the mechanism to promote the community approach. The government needs training mechanisms to develop human resources. In addition, promoting the community approach would prove useful if the government sustains village development schemes as national programmes.

### **9.10.2 Programmes and Projects for Critical Actions**

Separate programmes for community development would not be practical because it is a cross-cutting concept in rehabilitation and development programmes. The following project components have been identified for empowering communities; these can be incorporated into agriculture and fisheries programmes.

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<sup>7</sup> Participatory rural appraisal

<sup>8</sup> Community action planning method

## (1) Institutional development

## 1) Assuring the adoption of community approach

No.	Project Title	Location	Project Description	Duration	Implementing agency	Estimated cost (LKR thousand)
1	Community Infrastructure development for rehabilitation	Jaffna District	<p>Improving small scale community infrastructure such as water supply, roads, community centers, and facilities with community approach with following components.</p> <ul style="list-style-type: none"> <li>- Social mobilization</li> <li>- Capacity development training</li> <li>- Infrastructure development with community participation (Including Shramadana work)</li> <li>- Improvement of skills for the operation and maintenance of developed infrastructures</li> <li>- Strengthening of network with stakeholder</li> <li>- Provision of opportunities for communities to get together</li> </ul>	1 year (2011-2012)	DRD, DCD, DAD, DFAR and NGO	LKR 1,000,000 per GN Division
2	Community Infrastructure development	Jaffna District	<ul style="list-style-type: none"> <li>- Social mobilization</li> <li>- Community planning &amp; monitoring</li> <li>- Capacity development training</li> <li>- Infrastructure development with community contract</li> <li>- Improvement of skills for the operation and maintenance of developed infrastructures</li> <li>- Strengthening of network with multiple stakeholder</li> <li>- Promotion of opportunities for communities to get together</li> </ul>	3 years (2012-2014)	DRD, DCD, DAD, DFAR and NGO	LKR 2,000,000 per GN Division
3	Improvement of livelihood measures for quick recovery	Jaffna District	<ul style="list-style-type: none"> <li>- Social mobilization</li> <li>- Capacity development training</li> <li>- Community planning and monitoring</li> <li>- Skill training (technical, management, and marketing) designed according to the beneficiaries' capacity</li> <li>- Small-scale facility development with community participation</li> </ul>	1 year (2011-2012)	DRD, DCD, DAD, DFAR and NGO	LKR 500,000 per GN Division
4	Improvement of livelihood measures	Jaffna District	<ul style="list-style-type: none"> <li>- Social mobilization</li> <li>- Capacity development training</li> <li>- Community planning and monitoring</li> <li>- Skill training (technical, management, and marketing) to introduce innovate skills</li> <li>- Facility/infrastructure development with community participation</li> <li>- Improvement of skills for the operation and maintenance of developed facilities</li> <li>- Provision of access to formal financial institutions</li> </ul>	3 years (2012-2014)	DRD, DCD, DAD, DFAR and NGO.	LKR 1,000,000 per GN Division
5	Micro finance activities	Jaffna District	<ul style="list-style-type: none"> <li>- Group saving and crediting</li> <li>- Social mobilization</li> </ul>	3 years (2011-2013)	DCD and NGO	LKR 500,000 per GN Division

## **Recommendation for Implementation**

Following points should be taken into consideration in implementation of project.

- Quick impact or tangibility

Communities want to benefit from the project immediately, as they urgently need to recover their habitat and livelihood measures. In addition, quick impact is important to regain self and social reliance of communities who lost their social trust and confidence because of difficult experiences wartime.

- Outcome from construction with community contract

Experience in construction work with community contract would be useful for communities to obtain skills in project management, financial management, coordination and negotiation, and the operation and maintenance of provided facilities. They can also gain the knowledge of related government rules and regulations. Technical training and guidance is essential to ensure quality of community construction. Nevertheless to say, capacity development to maintain these facilities is essential.

- Livelihood development activities

In the immediate development stage, facilities and skills should be improved on the basis of the communities' experience and capacity to maintain these facilities and skills, while training to introduce innovative skills would be essential in mid-term development stage.

- Access to financial services for livelihood development

Credit services are necessary with flexible conditions so that the community can repay the credits easily in the immediate development stage. Beneficiaries would be encouraged to approach the private sector, including formal financial institutions, for taking loan in the mid-term development stage.

Micro finance activities, based on group saving and crediting, can be promoted in all development stages. Participants would be able to start small-scale group saving in the rehabilitation stage and develop scale of saving and crediting step by step. Mobilization and supervising are key factors in successful microfinance activities.

- Role of stakeholders

Relevant government departments would be responsible for project implementation. Financial and technical assistance from aid organizations would be useful for efficient project implementation. Especially, aid organizations are expected to introduce innovative skills for livelihood development. The involvement of local NGOs would be helpful for strengthening social mobilization. CBOs are required to take responsibility to carry out field-level activities, expanding the network with relevant government and private sectors.

Cooperative societies and formal financial institutions would become important actors for supporting communities in the provision of saving and financial services.

## 2) Improvement of set up to provide services for community approach

No.	Project Title	Location	Project Description	Duration	Implementing agency	Estimated cost (LKR thousand)
6	Awareness of the community approach	Jaffna District	- Assessing available human resources - Making the stakeholders aware of the community approach	3 years (2011-2013)	DRD	LKR 200,000
7	Improvement of set up to provide services for community approach	Jaffna District	- Developing the capacity of government officers and local NGOs - Planning the development of training mechanisms - Developing training mechanisms for stakeholders	5 Years (2013-2017)	DRD	LKR 3,000,000

### Recommendation for Implementation

Following points should be taken into consideration in implementation of project.

#### - Role of stakeholders

The relevant government departments are expected to identify the available human resources and provide them with the necessary awareness and training to adopt the community approach for their projects. Coordination by District Planning Department or Provincial Planning Secretariat for the training of government officers would be helpful in developing the officers' capacity.

The Provincial Planning Secretariat is supposed to be suitable actor to prepare plan for developing the training mechanism, discussing it with other departments of districts. Technical and financial assistance by aid organizations would be useful for execution of the training mechanism.

Collaboration with academic institution, such as Jaffna University, would be useful to establish quality and sustainable training mechanism.

### (3) Total cost to implement project for institutional development

As it was mentioned, programme for community development would be incorporated into agriculture and fisheries programmes, because it is a cross-cutting concept. Programme budget can be estimated based on the needs of Agriculture and fisheries development. If programme is targeted community institutional development, one GN Division can be improved as a model of institutional development. Model community and stakeholders would be able to disseminate their experience to other villages.

Expected total cost of programme is LKR 85,700,000. Breakdown of the cost is shown below.

- Project in immediate development needs ( One GN Division is selected from one DS Division)  
LKR 2,000,000 for one GN division x 15 = LKR 30,000,000
- Project in midterm development needs ( One GN Division is selected from one DS Division)  
LKR 3,500,000 for one GN division x 15 = LKR 52,500,000
- Improvement of set up to provide services for community approach  
LKR 3,200,000

Table 9- 21: Development Road Map 8 Institutional Development

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Goal ↓	Institutional Development	<p><b>Community participates in village rehabilitation work through CBOs</b></p> <ul style="list-style-type: none"> <li>Mutual assistance among neighbor/relations</li> <li>Function of CBOs                             <ul style="list-style-type: none"> <li>-Basic performance of CBO leaders</li> <li>-Organize committee meeting</li> <li>-Mobilization of members for assistance</li> <li>-Basic records</li> </ul> </li> <li>Communication with relevant organizations                             <ul style="list-style-type: none"> <li>- Respective government officers provide supervising and consultation for CBOs</li> </ul> </li> </ul>	<p><b>Community participates in development projects through CBOs</b></p> <ul style="list-style-type: none"> <li>Mutual assistance through CBOs</li> <li>Function of CBOs                             <ul style="list-style-type: none"> <li>-Performance of Community leaders</li> <li>-Organize general / committee meetings</li> <li>-Proper records with transparent practices</li> </ul> </li> <li>Network with stakeholders                             <ul style="list-style-type: none"> <li>-Communication between CBOs and multiple stakeholders</li> </ul> </li> <li>Common facilities with community maintenance system</li> <li>Contribution to the village (e.g., event, cleaning common places)</li> </ul>	<p><b>Community carries out development projects/ activities for sustainable socio economic development</b></p> <ul style="list-style-type: none"> <li>Mechanism for mutual assistance</li> <li>Functions of CBOs                             <ul style="list-style-type: none"> <li>-Proper performance of leaders</li> <li>- Organize general / committee meetings</li> <li>-Proper records with transparent practices</li> </ul> </li> <li>Dynamic network with stakeholders at all levels                             <ul style="list-style-type: none"> <li>-Two-way communication between CBOs and multiple stakeholders</li> </ul> </li> <li>Capacity to find appropriate stakeholders</li> <li>Common facilities with sustainable community maintenance system</li> <li>Contribution to the village by creating opportunities to inspire communities</li> </ul>	
	Approach ↓	Institutional Development	Mobilize communities to participate in rehabilitation projects through CBOs (community is facilitated to take their responsibilities)	Facilitate CBOs to implement small scale development project, raising awareness on community self-reliance and responsibility. (Community participation in planning, implementation, monitoring, and O&M)	Facilitate CBOs to implement development project in sustainable manner assuring community ownership and responsibility. (Community demand driven, community's process from planning to consolidation stages, promotion of diversification of CBO activities )
		Institutional Development	Raise awareness on community approach among stakeholders, analyzing stakeholders' capacity	Train stakeholders in community approach along with practical exercise (capacity development)	<ul style="list-style-type: none"> <li>- Develop mechanism to adopt community approach with the government for projects to improve living standard of communities</li> <li>- Improve training mechanism with the government in community approach to assure stakeholders' capacity building.</li> </ul>
	Roadmap ↓	Institutional Development (Adopting community approach for all projects to improve living standard of communities)	<p>Assess CBOs capacity to select project components to meet their capacity and condition (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p>Assure of including community mobilization and capacity development in the project component (Government departments who supervise CBOs function, such as DRD, DCD, DAD and DFAR)</p> <p>Ensure community driven approach / process approach / bottom up process component (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p>Promote diversification of CBO activities (Department of Rural Development)</p> <p><b>Quick Impact Pilot Projects (Tank renovation)</b>  <b>Project for improvement of community infrastructures</b>                      - Mobilization, capacity development trainings, strengthening network                      - Infrastructure development with community participation, consolidation for O&amp;M,                      - Promotion of opportunities to get together ((Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p><b>CC-1, 3, 4 Project to recover livelihood activities</b>                      - Mobilization, capacity development trainings, community planning &amp; monitoring,                      - skill trainings (technical, management and marketing), facility development with community participation,                      - promotion of credit facilities with flexible condition                      - promotion of opportunities to get together                      (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p><b>Project for improvement community infrastructures</b>                      - Mobilization, capacity development trainings, community planning &amp; monitoring, Technical transfer to introduce best practice, strengthening of network,                      - Infrastructure development with community contract, consolidation for O&amp;M capacity                      - Promotion of opportunities to inspire communities                      (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p><b>CC-2. Project to improve livelihood activities</b>                      - Mobilization, capacity development trainings, community planning &amp; monitoring,                      - skill trainings,(technical, management and marketing), facility development with community participation,                      - promotion of microfinance activities, <b>promotion of access to formal financial institutions (CC-5)</b>                      - promotion of opportunities to inspire communities (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p>Promotion of Micro finance activities (Department of Cooperative Development, NGO)</p>	<p>Promote diversification of CBO activities (Department of Rural Development)</p> <p><b>Project for improvement community infrastructures</b>                      - Mobilization, capacity development trainings, community planning &amp; monitoring, Technical transfer to introduce best practice, strengthening of network,                      - Infrastructure development with community contract, consolidation for O&amp;M capacity                      - Promotion of opportunities to inspire communities                      (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p> <p><b>CC-2. Project to improve livelihood activities</b>                      - Mobilization, capacity development trainings, community planning &amp; monitoring,                      - skill trainings,(technical, management and marketing), facility development with community participation,                      - promotion of microfinance activities, <b>promotion of access to formal financial institutions (CC-5)</b>                      - promotion of opportunities to inspire communities (Department of Rural Development, Department of Cooperative Development, DAD and DFAR)</p>	
Institutional Development (Improvement of set-up to provide services for community approach)		<p>Awareness for stakeholders, especially management staff on the importance of community approach (Department of Rural Development)</p> <p>Awareness for stakeholders, especially field level staff on the importance of community approach (Department of Rural Development)</p> <p>Assessment of capacity of stakeholders (Department of Rural Development)</p> <p>Awareness on community approach for stakeholders (Department of Rural Development)</p> <p>CC 1-4 Awareness on community planning and monitoring (Department of Rural Development)</p>	<p>Planning for development of training mechanism of stakeholders in community approach (Department of Rural Development)</p> <p>Capacity development projects for government officers and local NGOs in community approach with practical exercises (Department of Rural Development)</p>	<p>Establish mechanism to promote community approach with the government ; human resource development and assistance of village development projects</p> <p>Development of training mechanism of stakeholders in community approach approach (Department of Rural Development)</p>	

Pilot Project or activities handled by PDP-Jaffna

Project

Critical Action

**9.11 Road Map for Social Inclusion**

**9.11.1 Required Actions**

Table 9- 22 indicates the required actions for social inclusion in the immediate, short-term, and mid-term development stages. These specific actions are identified using the necessary approaches mentioned in Chapter 5.

**Table 9- 22: Required Actions to Promote Social Inclusion**

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
<b>Roadmap</b>	Social Inclusion	Reviewing and sufficiently supplying assistant mechanisms to support socially vulnerable groups and PWSN		
		Expediting the resettlement process to provide permanent houses to IDPs		
		Monitoring the networks between socially vulnerable groups/PWSN and religious groups/CBOs		
			Providing easy access for participation, information, or benefits to PWSN through CBOs	
			Recovering major infrastructures to develop industries for employment generation	

1) Reviewing and sufficiently supplying assistant mechanisms to support socially vulnerable groups and PWSN

As previously mentioned, some of the government support for socially vulnerable people was paltry and seemed even less significant in comparison with the present cost of living. It is ideal for the government to ensure the safety of people who have no income and rely on others for monetary support. Therefore, a review of the current social systems is crucial to identify the real needs of the communities and to sufficiently support the people who need it most.

2) Expediting the resettlement process to provide permanent houses to IDPs

While the resettlement process in Jaffna District has made considerable progress over the past few years, more than 45,000 individuals still need to be resettled as of June 2011. The process to clear the lands, open the restricted areas, and construct permanent houses should be expedited in order to fulfill the resettlement needs of IDPs. Close coordination and cooperation among the government and relevant donor agencies are crucial to achieving this task.

3) Monitoring the networks between socially vulnerable groups/PWSN and religious groups/CBOs

The Team found that many socially vulnerable people, especially IDPs, were not associated with social groups such as religious groups or CBOs. Social groups support the people by providing a forum for sharing of issues, relief from trauma, and discussions. They also provide physical support such as food. Therefore, networking between socially vulnerable people and neighboring social groups would help them restore their lives and start communicating with others. Government officers or social groups can support this networking.

4) Providing easy access for participation, information, or benefits to PWSN through CBOs

Generally, CBOs have close contacts with government officers and are therefore able to provide information and other beneficial opportunities to socially vulnerable groups. As the affiliation to CBOs was not so high (36%) for IDPs, they were occasionally isolated from community activities and events. The first step for social inclusion through CBOs would be informing IDPs of community activities and inviting them to participate in these activities.

5) Recovering major infrastructures to develop industries for employment generation

The recovery of major infrastructures to develop industries must commence toward the development stage. Larger scale development of the industry in the district would bring about stable employment in the area, especially among socially vulnerable groups.

**9.11.2 Programmes and Projects for Critical Actions**

Table 9- 23 indicates the pilot projects of PDP Jaffna and potential project ideas for social inclusion in the immediate, short-term, and mid-term development stages.

**Table 9- 23: Potential Projects to Promote Social Inclusion<sup>9</sup>**

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)
<b>Roadmap</b>	<b>Social Inclusion</b>	Brief survey on socially vulnerable groups	Survey on socially vulnerable groups' issues/needs	
		CC-5: Training on group counseling for widows	Group counseling training to establish platforms among PWSN and to formulate SHGs	
		Involvement of the government officers to project activities	Capacity development of government officers in charge of community development and supplementation of the shortage of staff	
		CC-1-4: Livelihood development of CBOs to include PWSN	Leadership training for CBO members	
			Individual/institutional opportunities for long-term livelihood development to targeting PWSN or CBOs to include PWSN	

1) Survey on socially vulnerable groups' issues/needs

Assessment of the condition of socially vulnerable groups is necessary to determine the appropriate measures to involve these groups in restoration and development activities. The Team conducted brief surveys on IDPs and WHFs; however, the coverage of these surveys was limited within the project's scope. Although some government officers recognize the issues and needs of socially vulnerable groups, a comprehensive analysis of the district is not available. Therefore, the assessment of target groups would provide a clearer picture for strategy development in supporting them. The GOSL can take the initiative to conduct the survey, perhaps with the support of other donor agencies, and a research institution may conduct the survey with the help of the local government. The training components for government officers at the field level can also be included in the survey for future monitoring.

2) Group counseling training to establish platforms among PWSN and to formulate SHGs

The pilot project (CC-5: Support for Widow's Society) convinced the Team that group counseling in

<sup>9</sup> Note: The shaded parts are the pilot projects of PDP Jaffna



socially vulnerable groups effectively empowers people through the sharing of similar experiences and compassion. Identifying the training needs of the group, selecting group members, providing training with appropriate resource persons, and monitoring and evaluating the training are the basic project components. The GOSL or donor agencies can initiate this training with the support of experienced NGOs in the field. In the future, the local government can follow up with the formed groups to formulate SHGs.

3) Capacity development of government officers in charge of community development and supplementation of the shortage of staff

While conducting the pilot projects for the women in the community, the Team found out that the government officers in charge, such as RDOs and GNs, could not spare enough time to visit and monitor the CBOs. Each officer covers many societies, so the shortage of staff needs to be supplemented. The capacities of government officers may vary, but the methods of survey and assessment, management capacity, and knowledge and technique regarding community development can be developed through training programmes. The GOSL or donor agencies can take a lead in initiating such training programmes, coordinating with donors who have been implementing similar projects.

4) Leadership training for CBO members

The Team observed the presence of a dominant leader in several CBOs. In order to create a democratic environment for the community, more leaders should be trained to benefit more people in the CBOs. Leadership training for CBO members can comprise training needs assessment, beneficiary selection, implementation of training programmes, and monitoring and evaluation. The GOSL or donor agencies can initiate this training with support of experienced NGOs in the field.

5) Individual/institutional opportunities for long-term livelihood development to targeting PWSN or CBOs to include PWSN

The foremost need of socially vulnerable groups is livelihood development. Some of them wish to gain individual support rather than institutional support because of the difficulty in participating in community activities. In the pilot project (CC-4), the beneficiaries were obligated to repay 40% of the supported amount for poultry provision. This proves that the project encouraged the beneficiaries to conduct business seriously and make efforts to be successful. Therefore, a small contribution from the beneficiaries can be included in the components for individual support. In-kind, technical, legal, financial, and marketing support can be included in the institutional support given to CBOs.

The Second Development Workshop in Jaffna for Community Development Sector was conducted on 18 July 2011. Relevant government officers from District Planning Secretariat, DRD, DS offices, and implementing agencies (NGOs) of PDP Jaffna attended the workshop. The list of the potential projects was discussed as follow.

**Table 9- 24: List of Potential Projects for Social Inclusion**

No	Project Title	Project Description	Duration	Implementing Agency	Estimated Cost (LKR thousand)
1	Survey on socially vulnerable groups on their issues and needs	- Survey on socially vulnerable groups on their issues and needs in order to formulate development strategies - Training for government officers at the field level on information collection and monitoring	1 year + review (2011-2012)	DS (District Planning Secretariat, DPS)	11,000
2	Capacity development of government officers in charge of community development	- Training of government officers in charge of community development in research/evaluation, management, special technique/knowledge, and so on - Supplement of shortage of staff	3 years (2013-2015)	Provincial Administration	Included in Institutional Development
3	Leadership training for CBO members	- Assessment of training needs - Selection of beneficiaries - Implementation of leadership training to CBO members - Monitoring and evaluation	3 years (2013-2015)	DRD, Local Government	40,000
4	Group counseling training to establish the platform among PWSN	- Assessment of training needs - Selection of beneficiaries - Implementation of capacity building training to PWSN including group counseling - Monitoring and evaluation - Formulate SHGs	5 years (2013-2017)	Social Service Department, Women Development Department, Provincial Administration	66,000
5	Formulating models on livelihood development	- Individual/institutional opportunities for livelihood development, including resource, technical, legal, financial, marketing support - Targeting PWSN or CBOs to include PWSN	5 years (2014-2018)	DS (DPS)	Included in Institutional Development and other sectors
Total Estimated Cost					117,000

The prioritized activities, project descriptions, implementing agencies, and time frame were discussed at the workshop.

### **Recommendation for Implementation**

The Team recommends the following procedures to be taken in order to embody the discussed projects above. District Secretariat would be the main coordinating agency in initiating the discussed projects, and the coordination between the donors, other relevant agencies will be required. Rough budgeting was made by the Team for reference after the workshop. The action plan of District Secretariat can be suggested as follow.

1. Initiate the continuous discussions with relevant stakeholders and consolidate the project ideas
2. Decide the major implementing agency for each project
3. Request the major implementing agencies to formulate a detailed project plan with budget
4. Hold discussions with relevant stakeholders, including donors and NGOs, for each project for further scrutinizing
5. Request the government, donors, or other agencies for support and budgets
6. Assist implementing the approved projects in Jaffna

**Table 9- 25: Development Road Map 9 Social Inclusion**

Stages		Immediate (2011-2012)	Short-term (2013-2016)	Mid-term (2017-2020)	
Goal ↓ Approach ↓ Roadmap	Social Inclusion	1 Availability of data/information on socially vulnerable groups/Persons with Special Needs (PWSN) with the relevant government organizations 2 Availability of sufficient support to meet the basic needs for PWSN 3 Completion of resettlement process and meeting the housing needs for IDPs 4 Establishment of platform (an arena for sharing) among socially vulnerable groups/PWSN 5 Connection with religious groups/CBOs for social support 6 Involvement in government officials	1 Availability of data/information on PWSN with the relevant government organizations/community leaders 2 Availability of sufficient support to meet the basic needs for PWSN 3 Completion of resettlement process and meeting the housing needs for IDPs 4 Establishment of platform (an arena for sharing) among socially vulnerable groups/PWSN 5 Connection with religious groups/CBOs for social support 6 Capacity development of government officers 7 Capacity building of CBOs to support socially vulnerable groups/PWSN (included in Institutional Dev't) 8 Availability of individual/institutional opportunities for livelihood development with in-kind, technical, legal, financial, or marketing support 9 Involvement of socially vulnerable groups/PWSN into CBO activities	2 Availability of sufficient support to meet the basic needs for PWSN through established mechanism/system 6 Capacity development of government officers 7 Leadership development among CBO members for socially vulnerable groups/PWSN 8-1 Availability of individual/institutional opportunities for livelihood development with in-kind, technical, legal, financial, or marketing support 8-2 Self-reliant business development by microfinance schemes (included in Institutional Dev't) 9 Involvement of socially vulnerable groups/PWSN into CBO activities 10 Industry development for sustainable employment	
	Social Inclusion	*Shaded bar parts can be categorized as the main roles of the Government.			
	Social Inclusion	1. Assessment on living condition and needs of socially vulnerable groups and PWSN 3. Promotion of resettlement process and meeting the housing needs for IDPs 4. Support for the establishment of platform (an arena for sharing) among PWSN 5. Support to connect with religious groups/CBOs for social support	2. Provision of sufficient assistance to meet the basic needs for socially vulnerable groups and PWSN 6. Promotion of capacity development of government officers 7. Nurturing leadership among CBO members 8. Promotion of individual/institutional opportunities for livelihood development 9. Promotion to involve vulnerable groups in CBO activities	4. Formation and strengthening Self Help Groups 10. Promotion of industry development for sustainable employment	
Social Inclusion	1. Brief survey on socially vulnerable groups 4. CC-5: Training on group counseling for widows 6. Involvement of the government officers to project activities 8 CC-1~4: Livelihood development of CBOs to include PWSN	1. Survey on socially vulnerable groups' issues/needs (DPS) 2. Reviewing and sufficiently supplying assistant mechanisms to support socially vulnerable groups and PWSN (DPS, Social Service Dept of Provincial Council) 3. Expediting the resettlement process to provide permanent houses to IDPs (Ministry of Resettlement, District Secretariat) 5. Monitoring the networks between socially vulnerable groups/PWSN and religious groups/CBOs (DS offices)	4. Group counseling training to establish platforms among PWSN and to formulate SHGs (Social Service Dept, Woman Development Dept) 6. Capacity development of government officers in charge of community development and supplementation of the shortage of staff (Provincial Admin) 7. Leadership training for CBO members (DRDO, ACLG) 8. Individual/institutional opportunities for long-term livelihood development to targeting PWSN or CBOs to include PWSN (DPS)	9. Providing easy access for participation, information, or benefits to PWSN through CBOs (DS offices) 10. Recovering major infrastructures to develop industries for employment generation	

Pilot Project or activities handled by PDP-Jaffna

Project

Critical Action

## **9.12 Implications for Longer-term Development**

Implementation of PDP Jaffna in general and the pilot projects in particular, has provided us with insights that will be useful when carrying out the Road Map-recommended programmes and projects in the future. The recommendations specific to the individual sectors are already discussed in the previous Sections. In this section, we will discuss their broader implications beyond the scope of the individual sectors; they will be useful for supporting Jaffna's well-balanced and strategic development in a long run. For this purpose, the discussion will shed light on the aspects of technology, infrastructure, institutions, markets, and special care to vulnerable people.

### **9.12.1 Technology**

Through the implementation of PDP Jaffna, in general, and of the pilot projects, in particular, the Team was impressed with the local people's industriousness and sincerity. For many discussion sessions scheduled during PDP Jaffna, government, NGO, as well as beneficiary people regularly attended these sessions and contributed by honestly expressing their respective opinions. Typically, we very much appreciated many participants' educated and informative observations during the First and Second Development Workshops. This aspect will continue to be a valuable asset for the future of Jaffna District and Northern Province.

However, a fundamental weakness we observed in the local society - regardless of sector - was the lack of knowledge in new technologies and innovations. For almost three decades, the district has been an isolated enclave, with an extremely low level of communication with a world that has witnessed a large number of new technologies and innovations during the same period.

The fisheries sector profoundly demonstrates this case. Seaweed farming is not a new thing at all; seaweed farming began in Southeast Asia at the same time the violent conflict flared up in Northern Province. Since then, for the three decades, no attempt has been made to experiment seaweed farming in Jaffna. Agriculture in Jaffna also seems to be lagging in the new, environmentally-friendly global trend. At present, organic farming is everywhere in the world - everywhere but in Jaffna. For Jaffna, time seems to have stopped sometime in the 1980s. Jaffna farmers are not even familiar with the use of earthworms to fertilize soils, which is now a common practice in India.

The same holds true in community development in Jaffna; to which new technologies were not brought during the conflict in agriculture, fisheries, animal husbandry, food processing and handicraft making. Local producers, individuals or small companies or CBOs, have a potential to improve their competitiveness by absorbing new technology from the south or elsewhere. For the same reason, the experience of QIPP calls for not only employment of local labours but a training component for them when implementing construction projects in the future.

The new technologies are necessary for not only producers but government agencies and NGOs. For instance, the methodology of community approach is still new in Jaffna. If the methodology is disseminated properly among communities, CBOs would become 'social resources' to lead development activities. As the first step, however, the methodology must be acquired by officials and practitioners of government agencies and NGOs.

Fortunately, many of the new technologies in agricultural, fishery, and small-livelihood sectors are available within Sri Lanka. In fact, the technical bases of many pilot projects were provided by domestic institutions based in the south. The high absorbing capacity of local people should also be mentioned here. For example, multi-day boats increased from 13 boats to 23 boats within only five months of early 2011 in Jaffna; one boatyard owner has developed his technical capacity for building multi-day boat with his own effort. As a result, the reality of multi-day boats has changed so dynamically in Jaffna that the Team often had to update information.

In order to become more globally competitive, every effort should be made to transfer new technologies to local people through vocational training, extension service, university education, retraining of public-officers and NGO practitioners. At the same time, it should be borne in mind that private companies could also efficiently facilitate technology transfer to local people.

### **9.12.2 Infrastructure**

In Jaffna District, the construction of bunds to prevent saline water intrusion to farming lands and the projects aimed to reduce salinity of lagoons are underway with funds of the World Bank and ADB. Smaller infrastructures in the agriculture sector are also being constructed steadily though huge demands for smaller infrastructure will require continued investment for many years to come.

The condition of fisheries infrastructure such as jetties, fish auction halls, and fish markets is generally poor. Foreign donors now appear to be more interested in development of large to medium-sized fishing ports; e.g. KOICA expressed their interest in fishing harbor development in Myliddy; DANIDA is developing a plan for Gurunagar fishing harbor in Jaffna City; and the Indian government is the KKS Commercial Harbor, which might also be used as a base for offshore fishing. PDP Jaffna has also prepared a pre-feasibility study on fishing ports in Point Pedro. As a result of these cumulative efforts, the situation of offshore fisheries must have been drastically changed after a few years from present.

If we look at infrastructure development in Jaffna in a broader frame, it is clear that once Jaffna's ongoing infrastructure rehabilitation projects are completed - specifically the KKS Harbor, Jaffna-Colombo railway track, and A9 Highway - more investment will be forthcoming by companies of the south and Tamil diasporas. Indian investors will also seriously consider investment opportunities in Jaffna.<sup>10</sup> They

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<sup>10</sup> The Reserve Bank of India recently revealed that foreign direct investment (FDI) by Indian companies abroad soared by 144% to USD 44 billion in 2010–2011 from USD 18 billion. Contrary to the conventional image, they actually invest six times more money abroad than they invest in India. For Tami Nadu companies, Jaffna could be a priority area for their FDI.

will likely invest in agro-processing and fish marketing along with many other business sectors. The local people should be prepared to take the best advantage of infrastructure development by the mid-2010s.

### **9.12.3 Institutions**

NGOs were a major player for reconstruction activities so far in agriculture and fisheries sectors, but governmental institutions may play a more important role for development activities from now on. At the moment, capabilities of government agricultural institutions are rather limited since the many vacancies of official position are not filled and government employees haven't had much chance to be trained, while many capable university graduates joined NGOs and donor projects, seeking better salary. For the implementation of development projects proposed in this report, the GOSL should take necessary measures to employ new officers as quickly as possible, in addition to develop the capacity of the existing officers and consider measures to keep their motivation high.

Educational institutions also have the similar issue; not only their equipment and gadgets are old but the knowledge of their teaching staff have not updated for a quite some time. At the First Development Workshop in Jaffna in February 2011, a local businessman raised opinion that school education and training conducted, for instance by Technical College, may not be tuned to contemporary business needs. UOJ is the only university in Northern Province, but negative impacts of the protracted conflict is apparent in terms of the lack of laboratories and other facilities for practical education. These issues should be addressed urgently to let educational institutions in Jaffna function as disseminators of new technologies and management.

NGOs' roles have also changed from the distributor of humanitarian assistance to development facilitators. Capacity development of local NGOs is also needed to enable NGOs to perform the new role in the post-conflict era. For example, Sewalanka Foundation has successfully played this new role as the implantation partner in the seaweed pilot project. JSAC also did an excellent job for providing new business skills for WRDSs in the pilot projects. However, with an exception of nation-wide NGOs, locally based NGOs themselves need to be bolstered with technical training. PDP Jaffna provided an opportunity for Sewalanka practitioners to learn an advanced technique for drying fish so that they are now able to teach local women the technique. It is hoped that donors will make more conscious efforts to train local NGOs technically.

In terms of CBOs, probably with the only exception of FCS, it appears that Jaffna CBOs are not necessarily better organized or better performing than their peers in the south. Like any other Sri Lankan district, FOs are organized area wise in Jaffna, but they are characterized as government aid-receivers and short of genuine cooperative. Their transformation to genuine cooperative with independent economic activities would be considered in the near future. However, this is a challenge that should be first dealt with on a national and not a regional level.

Another issue to be addressed is needs for good coordination among related institutions. Government agencies involved in the agriculture sector are DOA, DAD, DAPH, DOI, CCB, PDB and some more. Many of their activities are interlinked and sometimes even overlapped. Before the implementation of the proposed projects, the implementing agency should share project information with relevant institutions and coordinate project activities.

The same thing can be said between government agencies and CBOs. The Team proposed the Coastal Fishery Resources Management Project to create a co-management system for coastal fisheries. The co-management system could be realized through the integration of two fisheries management systems, i.e. the one is CBO-based fisheries management, and another is top-down type fisheries management based on scientific research by government agencies. The cooperation and coordination among fishermen's organizations and DFAR are very important for the success of the co-management project. In every sector, CBOs are required to strengthen access to government development service and private services including formal financial institutions.

Of course, good coordination among different organizations is not always easy; those in other institutions may be engaged in various tasks with little time to spare for extra projects. The only solution for this issue is close consultation with the concerned agencies before commencing the project.

Finally, let us touch on a new issue emerging within the fisheries sector; the MFAR has begun a nation-wide promotion to set up Rural Fishermen Organizations. What, then, will the difference be between FCS and this new organization? Regardless of the government's good intentions, the Team hopes that this new policy will not confuse existing fishermen organizations in Jaffna as this could be "kill the goose that lays the golden egg".

#### **9.12.4 Markets**

Socio-economic situation in Jaffna is changing rapidly. After the A9 opened, some vegetable products were brought from the south and thereby local products fetch lower prices. On the other hand, some of Jaffna's traditional fruits and vegetables such as mango, string bean, moringa and cassava have fetched higher prices thanks to a huge market in the south. Market consideration is one of very important elements to succeed in developing agriculture or fisheries.

In the fisheries sector, marketing of sea cucumber farming is relatively easy because it is an established valuable commodity in international markets especially in China and Chinese living countries. A local buyer collects fresh sea cucumber, dries and delivers them to Colombo. The sea cucumber farmers can take advantage of the established transaction chain. Whereas in the case of seaweed, which is also an international commodity with big demand in markets, this kind of transaction chain has yet to be established in Sri Lanka and no demand is seen for seaweed in Jaffna. However, since confectionaries such as Ceylon Biscuit Limited (CBL) use powdered seaweed as a binding agent, it may be effective to

make the linkage with domestic confectionaries in addition to finding linkage for export markets. These cases demonstrate that partnership with private business will be an essential element for future development projects that are designed for income generation on a grass-root level.

A big change in products market would be expected once the current rehabilitation works at the KKS Harbour finish. A resultant rise in trading between Jaffna and India will likely bring about significant opportunities and, at the same time, threats to local primary industries through direct competition with Indian agricultural and fishery products. This impact could be as large as that of the A9 opening in 2009. Nonetheless, global competition is something unavoidable in today's world, and further dismantling of trade barrier is expected among member countries of the South Asian Association for Regional Cooperation (SAARC). The best policy is to be prepared for another sea change in the market.

#### **9.12.5 Special Care to Vulnerable People**

The most urgent and essential needs of communities are the recovery of available livelihood measures such as agriculture, livestock and fisheries production. As the GOSL is already well aware of, offshore fisheries and aquaculture can potentially provide a number of new employment. The benefits would also accrue to the socially vulnerable people. Many impoverished women can make some income by processing fish in Jaffna, but more fish will not be available for processing unless offshore fisheries are developed. For this purpose, capacity development of CBOs should primarily target CBOs that are directly related to production activities, typically FO and FCS.

However, women should be approached through an alternative assistance channel because FOs and FCSes are generally male-oriented in Jaffna. Additionally, many widows now require livelihood measures. Under the present socio-economic environment in terms of the availability and actual activity level of women's societies in Jaffna, WRDSs seem to be the most appropriate channel to improve women's livelihoods. Also, women's solidarity groups engaging in micro finance activities can be a platform to carry out small-scale livelihood development projects.

As a means of social inclusion, assessing the variety of socially vulnerable groups is a must. Even among WHFs, there are different types of vulnerability with different needs. The assessment of target groups is necessary when designing interventions for support. Some of them needed basic support such as food and housing. Others did not have ability to work because of their age or physical/mental problems. Therefore, a concrete strategy is recommended to develop during the designing period. For example, the vulnerable may not be able to attend training programme intended for them because the participation means losing their one-day earning. It is therefore recommended to compensate the vulnerable peoples' earning when training particularly targets to them. This is one of lessons we learned in PDP Jaffna.

In the same context, we consider that infrastructure development and livelihood improvement can be combined in many projects. For example, infrastructure development can provide communities with an



opportunity for earning incomes through labour work. At the same time, however, CBOs tend to have limited technical and managerial capabilities which may contradict with requirements of development projects. A balance should be struck between them.

Finally, some CBOs already have a supporting mechanism for socially vulnerable people in the area. The Tharaka Widow's Society provides an arena for sharing experiences and discussion. These available resources should be extended to form a role model for other societies. This sort of model functions should and could be further explored in Jaffna.