No.

Ministry of Fisheries and Aquatic Resources
Tsunami Housing Reconstructon Unit
Ministry of Provincial Council and Local Government
Ministry of Finance and Planning

Japan International
Cooperation Agency
(JICA)

Recovery, Rehabilitation and Development Project for Tsunami Affected Area of Southern Region in the Democratic Socialist Republic of Sri Lanka

Final Report

ANNEX

March 2006

PADECO Co., Ltd.
in association with
NIPPON KOEI Co., Ltd.
and
OVERSEAS AGRO-FISHERIES CONSULTANTS Co., Ltd.

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For the currency conversion, in case necessary,
Exchange rate shown below is applied

1 USD= 107.00 JPY,
1 Rs= 1.0 JPY

ANNEX

Table of Contents

ANNEX 2-1 Survey Sheet for Fish Traders/Boat Owners

1. Vehicle No.: _____

2. Resident place of vehicle owner:

☐ Kirinda ☐ Colombo ☐ Other place
Please specify, _____

3. Profession of vehicle owner:

☐ Wholesaler ☐ Retailer ☐ Boat owner ☐ Others

4. Type of vehicle: ☐ Insulated truck
☐ Ordinary car
☐ Three wheeler
☐ Motor cycle
☐ Others Specify, _____

5. Quantity, Price and Destination of fish:

	Quantity	Price	Destination
1) Seer	_____kg	_____Rs./kg	_____
2) Balaya	_____kg	_____Rs./kg	_____
3) Kelawalla	_____kg	_____Rs./kg	_____
4) Paraw	_____kg	_____Rs./kg	_____
5) Blood fish	_____kg	_____Rs./kg	_____
6) Sharks and Rays	_____kg	_____Rs./kg	_____
7) Rock fish	_____kg	_____Rs./kg	_____
8) Shore seine varieties	_____kg	_____Rs./kg	_____
9) Prawns	_____kg	_____Rs./kg	_____
10) Others	_____kg	_____Rs./kg	_____

6. Use of (a) fish box(s)? at auction hall of Kirinda fishery harbors:

☐ Yes ☐ No

7. Use of ice:

☐ Yes ☐ No

8. For those who responded, “Yes”,

How many kg of ice: _____kg

Type of ice: ☐ Flake ice ☐ Block ice (crushed) ☐ Plate ice

Where to purchase ice: _____ (before tsunami)

Where to purchase ice: _____ (after tsunami)

9. Frequency of purchase of fish at Kirinda fishery harbor:

☐ Everyday ☐ 4-6 days a week ☐ less than 3 days a week

10. Problems after tsunami:

☐ Shortage of fish

☐ Shortage of ice

☐ Low fish consumption

☐ Damage or lost of marketing equipment

Specify the equipment, _____

☐ Others Specify _____

ANNEX 2-2 Survey Sheet for Fishermen/Fishing Boat Owner

1. Name: _____ 2. Age: _____

3. Resident place: _____

4. Status: ☐ boat owner / ☐ skipper / ☐ crew / ☐individual fisherman

5. Boat registration number: _____

6. Type of your boat:

☐ multi-day boat / ☐ one day boat / ☐ FRP outboard / ☐ ORU

7. Type of engine:

☐ inboard _____hp, manufacturer _____

☐ outboard _____hp, manufacturer _____

8. Type of fishing gear:

☐ drift net / ☐ long line (for tuna)/ ☐ trolling / ☐ purse seine /

☐ bottom long line (for rock fish) / ☐ hand line / ☐ diving

☐ others, please specify _____

(Multiple answers is possible)

9. Last and before last fishing operation:

	Last operation	Before last operation
Departure date:		
Departure time:		
Arrival date:		
Arrival time		
Catch (kg):		
Species:		
No. of fishermen on board		
Sales of catch (Rs.)		
Cost of fuel (Rs.):		
Cost of ice (Rs.)		

10. Number of fishing trip in April: _____

ANNEX 3-1 Administrative Structure and Practices of the Public Administration

1 Provincial Government

Outside of Central Government which consists of the President, Parliament and Cabinet of Ministers the main body of governance in Sri Lanka which manages district level matters is the Provincial Government. The Southern Provincial Government which consists of 3 districts of Matara, Galle and Hambantota is the one which governs Matara district. There is no definition of Provincial Government but it is not:

- A Government Ministry or Department;
- A Local Authority;
- A Statutory Corporation or Authority; or
- A Public Company.

A Provincial Council -

- Is an autonomous body and is not under any Ministry; and
- Derives its authority and power from the Constitution and Acts of Parliament. PC undertakes activities which had earlier been undertaken by the Central Government Ministries, Departments, Corporations and Statutory Authorities.

1.1 Functions of Provincial Councils

The functions of the Government and the Provincial Councils are listed in the Ninth Schedule to the Constitution, which comprises of three lists.

List I	Provincial Councils List
List II	Reserved List
List III	Concurrent List

(1) Provincial Councils List

The subjects in this list are considered fully devolved to the Provincial Councils subject to the national policy on each such subject. Provincial Councils can pass statutes on these subjects without any further requirements. However if any provision of such a statute is inconsistent with the provision of an Act of Parliament passed after the Thirteenth Amendment, then there will be no validity in such provision.

(2) Reserved List

The Provincial Council cannot exercise any power in respect of any subject in this list nor can it pass any statute in regard to them.

(3) Concurrent List

The Provincial Council can exercise power in regard to the subjects in this list. However before the Provincial Council could pass a statute on such subject, it should consult Parliament for its opinions on the provisions contained in such statute. The Provincial Council however is not bound to give effect to whatever opinion that is expressed by Parliament.

Where Parliament desires to pass an Act on a subject in this list it can do so provided however that it would consult the Provincial Councils about the provisions of such Act. Here again, it is not mandatory for Parliament to give effect to the opinions expressed by the Provincial Councils.

The Provincial Council is organized into nine institutions:

i) The Governor;
ii) The Council (Legislature);
iii) The Chief Minister;
iv) Four Provincial Ministries;
v) The Provincial Public Service Commission; and
vi) The Chief Secretary.

The Governor is the only person in the Council who has direct executive powers deriving from the Constitution.

1.2 Revenue of the Provincial Council

The revenue of the Provincial Council is as follows.

1）Ernment Grant (Art. 154 R)

- Recurrent Grant
- Block Grant
- Capital Grant
- Criteria Based Grant
- Medium Term Investment Programme Grant
- Matching Grant

2）Revenue (*Item 36 in List 1*)

- Turnover Taxes
- Excise Duties Motor Vehicles
- Stamp Duty Other Revenue, 36:14, 36:16

1.3 Expenditure of the Provincial Council

The moneys received in the above manner are defrayed as follows.

1）Recurrent expenditure
- Personal emoluments
- Traveling
- Supplies
- Contractual services
- Current transfers
- Current grants
- Other expenditure

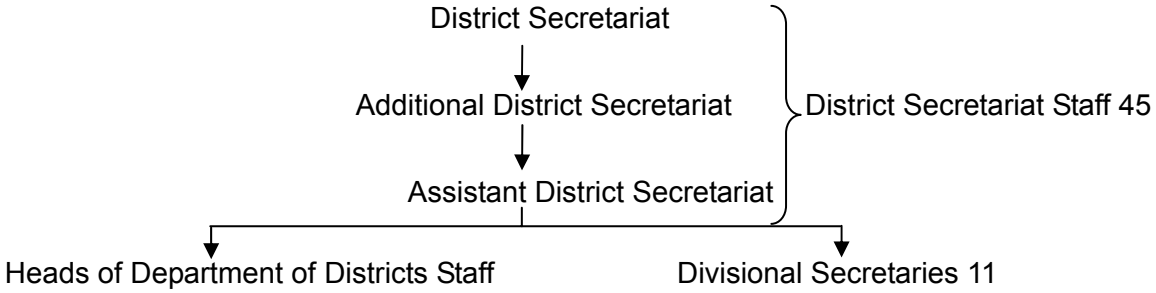
2）Capital expenditure
- Ordinary capital expenditure
- Development projects
- Grants to local authorities
- MTIP projects

2 Central Government Administrative Structure at District Level

2.1 Structure of the Administration

At district level the most important government servant is the District Secretary (DS) despite his lack of funds. DS a continuation of the colonial Government Agent (GA) still has the responsibilities of district level co-ordination of government services and administration. He no longer has the taxation, police and judicial powers the colonial Government Agent has. Under him horizontally is the lowest level of government service going down to the village worker the Grama Niladhari as shown in Figure 1.

Departments under the Direct Administrative Supervision of District Secretary.



Planning Department	20
Samurdi Commissioner	5
Samurdi Authority	31
Loan Department	5
Cultural Department	5
Small Business Department	5
Motor car license Department	5

Grama Niladhari 225

Figure 1 Structure of Central Government Administration at District Level

2.2 Income of District Secretary Offices

There is no income generated by the District Secretary Office. It depends entirely on the Ministry at national level for its staff salaries and other operating expenses. This is specially to pay the salaries of the 45 direct staff of District Secretary Office. But other department under the district secretary administratively has budgets. This includes all the departments and authorities (Samurdhi) which has staff reporting to District Secretary. They get these budgets from their own head office departments through the National office responsible for this work. Some such as Planning Department by and large has only salaries and a small operational budget. But agencies such as Samurdhi Commissioner and Samurdhi Authority have significant budgets to serve the people at large.

2.3 Income of Divisional Secretary Offices

Though District Secretary Offices do not have income divisional secretary offices have sources of income. These include the following:

- Income from Income Certificates (ranges from Rs.29,000 to 161,000 in divisions in Matara in 2002);
- Income from providing Land Value Assessments (certificate) (range from zero to 41,150 in Matara);
- Rent from government land leased (range from zero to 72,000 in Matara);
- Taxes range from zero to 352,250 (the high figure is always for urban highly populated division such as Matara division); and
- Timber license range from zero to 65,125.

This income however is not used for development work but remitted to treasury. The staffing and administration at divisional level is similar to district office but of a lower scale. All the departments present at District level is also present at divisional level.

2.4 Government Agencies Working at District Level

There are so many different agencies working at district level. Table 1 tries to capture them in summary with few examples.

Table 1 The Government Agencies Working in District

Type of Agency	Example/ Description of Agency	Role	Responsible To
District Secretary	(Divisional Secretary come under them-District is broken into 8 to 15 division)	District Administration	Ministry of Public Administration, at national level
Central Government Ministries /Department	e.g. Education-Responsible for designated national schools, Health Department responsible for General Hospitals	To do social development work which is not devolved to province	Ministry's at National Level
Central Government Authorities/ Boards	e.g. Industrial Development Board ,Central Environment Authority , Inland Revenue	Responsible for that sector	The relevant Ministry at National Level
Provincial Government	Elected by people headed by a Chief Minister and CEO Chief Secretary	Provincial Development (Only devolved subjects)	Chief Minister to Governor (nominee of President)
Provincial Ministries	There are 5 Ministries with multiple functions reporting to Chief Minister	Education, Health, Public Utilities, Irrigation	Chief Minister of Province.
Municipal Council Urban Council and Pradseshiya Shaba	Local Government Elected by people e.g. Matara MC headed by Mayor Chief Administrative Officer Municipal Commissioner	Public Health, Sanitation, Low grade roads, Eating house food quality, Common facilities, garbage, markets	Local Government Ministry at Provincial Level

3 Powers and Budget of the Local Government

3.1 Matara Municipal Council

As a consequence even Municipal Council such as Matara has only a small budget of110 million Rs in the current year. But it has 350 employees of who around 250 is labor. This takes away over 50% of the annual budget leaving only around 45 million Rs for program work besides labor. The main sources of income are:

- Assessment Tax;
- Trade License;

- Fines;
- Stamp Duty on Land Transactions; and
- Contribution from Central Government for Salaries.

With this limited budget the municipality has to serve a population of 72,000 in all these services.

1）Sanitation and Health
- Maintain Public Toilets - currently 7
- Supervise and Ensure Food quality in restaurants
- Controlling of Epidemics (Joint responsibility with Ministry of Health)
- School Sanitation
- Clinics (Children, Family Planning)
- Crematorium/Cemetery
- Town Garbage Collection

2）Social Services
- Play Grounds (4)
- Children's Play grounds (2)
- Municipal Library
- Pola (Sunday Market in Town)
- Community Centers

3）Public Works
- Repair and Maintenance of Roads(C, D, E Grade)
- Drainage
- Maintenance of Buildings coming under Municipality Council

With more than 50% of the budget going for salaries and that too relatively low paid staff and workers the ability of the Municipalities to maintain the Municipal area in some form of livable condition is minimal. All Municipalities in Sri Lanka including even Colombo and Matara has serious problems in garbage collection and disposal, in constructing adequate public toilets and maintaining even the few ones available, in ensuring that eating houses give acceptable food. Thus most of the facilities listed above are in bad condition and most services that are supposed to be done by the MC done very minimally and poorly.

3.2 Pradeshiya Shaba's

This is the lowest level of local government. A pradeshiya shaba consists of elected members chaired by the Pradeshiya Shaba Chairman. Normally the members range form 10 to 15. The normal population of a PS ranges from 50,000 to 60,000. Each member

represents about 1,400 to 1,500 families. The staff of a pradeshiya shaba range from 30 to 50. The budget range from 20m Rs to 50m Rs. Income sources of a Pradeshiya shaba is as follows:

- Recurrent Income -Tax, Rent(market), trade license, services, fines;
- Capital grants received by members for development work (Rs.50,000 maximum per member);
- Land Transaction Income; and
- Provincial Council Grant for Salaries.

The functions a PS are responsible are:

- Public Health and sanitation;
- Public Utilities - Water;
- Government Land and Building (which does not come under statutory bodies or central government);
- Roads (D and E); and
- Welfare services (community centers, libraries etc).

However over 50% of the budget goes for salaries leaving very little for social and development work.

The damages incurred due to tsunami by other local government agencies were as shown in Table 2.

Table 2 Loss of Other Government Agencies

Local Government Agency	Estimated tsunami loss to property of the agency (million Rs)
Matara MC(as above)	24.1
Weligama Urban Council	5.8
Weligama PS	23.3
Dickwella PS	20.3
Devinuwara PS	6.0

4 Issues of Local Public Administration

As the earlier section indicated despite great role, on devolution of governance by the centre in the last 2 decades so far a very small role, powers and budget has been given to local government. There are two key problems why this is so.

Despite the political agenda to decentralize in actual effect, both central level politicians and officials do not like to give up on power. This is both due to lack of confidence in the capacity of local government as well as normal human desire to cling to power and funds.

Thus the budgets given by central government as well as sources of revenue assigned to local government is inadequate.

Another key reason is that poor budget's at their disposal disables the local government agencies from recruiting good quality staff including professionals who can create opportunities for revenue using the existing powers given to the council. This becomes worse as the level of local governance becomes smaller. For example the role, functions and budget of Pradeshiya Shaba's is minimal with hardly any revenue sources and very little implementing capacity due to inadequate and weak staff. It is an egg and chicken situation, lack of capacity disables them to even exploit potential sources of income generation empowered by law to these councils. Thus in actual fact local governments are not using the powers they have been given under legislation to generate revenue due to lack of capacity to do so.

Though there are few macro level affects of tsunami where the national government has to take action most impact is at local level and community level. Most affected were people and their basic needs generally met and satisfied at local level. Thus a greater role for local government especially Pradeshiya Shaba in partnership with the lowest central level government servant Grama Sevaka would have given better results. This is especially so as community based disaster management can only be organized at this level.

Matara Municipality or any other local government was not equipped to assist tsunami victims in a major way due to these budgetary and personal constrains. Municipality was not given any funds or role by the Central Government to assist tsunami victims or even repair the Municipality managed common building like toilets so far. It is so bad even the municipality staff quarters which were damaged have not been repaired so far. The table given earlier provided the damages to common property managed by the Municipal Council. The Municipality has however given proposals to few donors such as JICA and USAID to rehabilitate damaged infrastructure and to assist the communities living in the Municipal limits, but so far no funds have been received.

For local government to play a more active role in meeting basic needs of the tsunami population, some of the donor and NGO funds should be used to develop their capacity as well as to provide needs of the people. JICA project does this by working with the Municipality of Matara primarily to meet the public infrastructure destroyed by tsunami in Matara town.

ANNEX 3-2 Fishery Industry Rehabilitation Plan

1 Revitalization Plans

1.1 Optimum Distribution Plan of Facility and Equipment

(1) Japanese Non-Project Grant Aid

In order to recover the damages affected by the tsunami and to revitalize the fisheries sector in the Southern Region, in line with other donors and NGOs, the Government of Japan is conducting the Non-Project Grant Aid, which contributes approximate 25% of its budgetary scale to the fisheries sector. Table 4 shows the components of the fisheries sector of the Non-Project Grant Aid concerned.

Table 3 Contents of Japanese Non-Project Grant Aid (Fisheries Sector)

Item No.	Name of Facility and Equipment	Quantity	Counterpart Agent
1.	Container type workshop		CEY-NOR
1.1	Truck	1 unit	
1.2	Trailer	11 units	
1.3	Workshop Container with Tools	11 units	
2.	Materials to repair and replace traditional boats		CEY-NOR
2.1	Fiber Glass Raw Materials	1 lot	
2.2	Spare Parts for Yamaha Engine	1 unit	
2.3	Spare Parts for Suzuki Engine	1 unit	
3.	Local type boat		CEY-NOR
3.1	Traditional Boat 16ft	600 units	
3.2	Traditional Boat 18.5ft	700 units	
3.3	Traditional Boat 21ft	200 units	
3.4	Fishing Gear Package for Traditional Boat	1,500 units	
3.5	OBM Day Fishing Boat 18.5ft	150 units	
3.6	OBM Day Fishing Boat 19.5ft	150 units	
3.7	OBM 9.9 Hp	75 units	
3.8	OBM 15 Hp	150 units	
3.9	OBM 25 Hp	75 units	
3.10	Fishing Gear Package for OBM Day Fishing Boats	300 units	
3.11	IBM Day Fishing Boat 30ft (Boat)	40 units	
3.12	IBM Day Fishing Boat 30ft (Engine)	40 units	
3.13	Fishing Gear Package for IBM Day Fishing Boats	40 units	
4.	Container type ice plant & cold storage		CFC
4.1	Containerized Block Ice Plant	11 plants	
4.2	Containerized Cold Storage	12 plants	
5.	Freezer truck		CFC
5.1	Insulated Refrigerator Trucks for the Transport of Wet Fish	60 units	
6.	Japanese Style Fishing Boat		
6.1	OBM Fishing Boat	(Remark)	
6.2	IBM Fishing Boat		
	(1) 50 ft class local fishing boat for tuna long line	2 boats	CFC
	(2) 50 ft class Japanese style fisheries training boat	1 boat	NIFNE

Item No.	Name of Facility and Equipment	Quantity	Counterpart Agent
7.	Rehabilitation of Fishery Harbors		
7.1	Rehabilitation of Galle Fishery Harbor	1 lot	CFC/CFHC
7.2	Rehabilitation of Tangalle Fishery Harbor	1 lot	CFC/CFHC

Remark: As the feasibility of introduction of Japanese Style OBM fishing boats is not justified, the budget allocated for this item will be transferred to another Japanese Non-Project Grant Aid related item.
Source: MOFAR

(2) Equipment to Recover Fishery Activities

1) Planning Process and Selection Criteria

Container type workshop (Item 1), Materials to repair and replace traditional boats (Item 2) and Local type boat (Item 3) were selected as components for the repair of damaged equipment and compensation of lost equipment for the purpose of recovering the fishery activities through distribution of basic fishing equipment. The Container type workshop (Item 1) and Materials to repair and replace traditional boats (Item 2) are utilized by CEY-NOR to repair and replace fishing boats and OBMs damaged by the tsunami. Local type boats (Item 3) consisting of fishing boats, OBMs and fishing gear are directly distributed to fishery households that suffered from the tsunami.
The distribution program was planned by the Department of Fisheries & Aquatic Resources (DFAR) of MOFAR, and distribution procedures for the equipment are planned to be supervised by CEY-NOR and monitored by DFAR.

Predominantly in February, 2005, DFAR undertook damage surveys of each fishery household through its regional assistant directors and with the assistance of volunteers. As a result of these surveys, an Entitlement Card was distributed to each fishery household. This Entitlement Card describes all necessary information for taking care of damaged fishery households such as name & address of fishermen, kinds of fishing equipment, detail damaged status of fishing equipment, etc. After each assistant director of DFAR reported the necessities of repair and compensation based on the Entitlement Cards to its main office, DFAR compiled the nation-wide program of repair and compensation for the fishing equipment and allocated to Japanese Non-Project Grant Aid the quantities of the equipment as shown in Table 3.5. In consideration of the distribution destinations of the fishing equipment in the Japanese Non-Project Grant Aid and its logistic network in the local area, CEY-NOR selected the distribution destinations of the Container type workshop. Thus, the planning process for the equipment to recover fisheries activities was managed appropriately. Though, the original destinations of the equipment concerned are shown as in the original program, some destinations have been adjusted by DFAR in consideration of the distribution progress of similar equipment by other donors or NGOs.

Table 4 Detailed Distribution Program of Container Type Workshop, Materials to Repair and Replace Traditional Boats and Local Type Boats

Item No.	Name of Equipment	Quantity	Original Distribution Destination and Distribution Combination
1.	Container type workshop		
1.1	Truck	1 unit	Colombo
1.2	Trailer	11 units	Each Trailer is distributed as attachment for each Workshop Container with Tools.
1.3	Workshop Container with Tools	11 units	Trincomalee, Batticaloa, Ampara, Hambantota, Matara, Galle, Jaffna, Kilinochchi, Mullaitivu, Negombo, Colombo: each 1 unit
2.	Materials to repair and replace traditional boats		These Materials are used in combination with the activities by the above Workshop Containers with Tools
2.1	Fiber Glass Raw Materials	1 lot	
2.2	Spare Parts for Yamaha Engine	1 unit	
2.3	Spare Parts for Suzuki Engine	1 unit	
3.	Local type boat		
3.1	Traditional Boat 16ft	600 units	Trincomalee: 470 units Galle: 40 units Matara: 40 units Hambantota: 50 units
3.2	Traditional Boat 18.5ft	700 units	Trincomalee: 191 units Batticaloa: 389 units Ampara: 120 units
3.3	Traditional Boat 21ft	200 units	Hambantota: 130 units Kalutara: 20 units Galle: 20 units Matara: 30 units
3.4	Fishing Gear Package for Traditional Boat	1,500 units	Each unit of Fishing Gear Package for Traditional Boat is distributed as attachment for each Traditional Boat.
3.5	OBM Day Fishing Boat 18.5ft	150 units	Trincomalee: 19 units Batticaloa: 25 units Ampara: 6 units Hambantota: 15 units Matara: 15 units Galle: 20 units Jaffna: 35 units Kilinochchi: 15 units
3.6	OBM Day Fishing Boat 19.5ft	150 units	Hambantota: 60 units Matara: 40 units Galle: 50 units
3.7	OBM 9.9 Hp	75 units	Each unit of OBM 9.9 Hp is distributed as attachment for each OBM Day Fishing Boat 18.5ft.
3.8	OBM 15 Hp	150 units	With regard to 75 units of OBM 15 Hp, each unit of OBM 15 Hp is distributed as attachment for each OBM Day Fishing Boat 18.5ft. The remainder 75 units of OBM 15 Hp are for OBM Day Fishing Boats 19.5ft.
3.9	OBM 25 Hp	75 units	Each unit of OBM 25 Hp is distributed as attachment for each OBM Day Fishing Boat 19.5ft.

Item No.	Name of Equipment	Quantity	Original Distribution Destination and Distribution Combination	
3.10	Fishing Gear Package for OBM Day Fishing Boats	300 units	Each unit of Fishing Gear Package for OBM Day Fishing Boat is distributed as attachment for each OBM Day Fishing Boat.	
3.11	IBM Day Fishing Boat 30ft (Boat)	40 units	Trincomalee Batticaloa: Ampara: Hambantota: Matara: Galle:	1 unit 4 units 15 units 5 units 10 units 5 units
3.12	IBM Day Fishing Boat 30ft (Engine)	40 units	Each unit of Engine for IBM Day Fishing Boat is distributed as attachment for construction for each IBM Day Fishing Boat.	
3.13	Fishing Gear Package for IBM Day Fishing Boats	40 units	Each unit of Fishing Gear Package for IBM Day Fishing Boat is distributed as attachment for each IBM Day Fishing Boat.	

Source: MOFAR

2) Procurement and Distribution Process

Procurement of the equipment has been supervised by JICS. The status of the procurement is shown in Table 6. All equipment concerned is transported to the designated destination by the supplier. When targeted fishermen receive the boats, OBMs and/or Fishing Gear Packages, the concerned column(s) of the Entitlement Card is/are marked by the assistant director of DFAR of MOFAR and fishermen lost the right to receive the concerned equipment furthermore. As each assistant director of DFAR of MOFAR reports distribution results to its main office, DFAR was to report the distribution results such as names of fishermen and destinations to the Government of Japan after completion of distribution of all the equipment concerned.

Table 5 Present Status of Procurement of Container Type Workshops, Materials to Repair and Replace Traditional Boats and Local Type Boats

Item No.	Name of Equipment	Supplier	Prospected Distribution Time
1.	Container type workshop		
1.1	Truck	To be determined by the tender early in June, 2005	Prospectively, October or November, 2005
1.2	Trailer		
1.3	Workshop Container with Tools		
2.	Materials to repair and replace traditional boats		
2.1	Fiber Glass Raw Materials	U.S.S. Service Ltd.	Demarcated in May, June and July, 2005
2.2	Spare Parts for Yamaha Engine	Associated Motor (Lanka) Co., Ltd.	July, 2005
2.3	Spare Parts for Suzuki Engine	Neil Marine Ltd.	November, 2005
3.	Local type boat		
3.1	Traditional Boat 16ft	CEY-NOR	By the end of August, 2005
3.2	Traditional Boat 18.5ft		

Item No.	Name of Equipment	Supplier	Prospected Distribution Time
3.3	Traditional Boat 21ft		
3.4	Fishing Gear Package for Traditional Boat	Under tender negotiation	October or November, 2005
3.5	OBM Day Fishing Boat 18.5ft	CEY-NOR	By the end of August, 2005
3.6	OBM Day Fishing Boat 19.5ft		
3.7	OBM 9.9 Hp	Associated Motor (Lanka) Co., Ltd.	Demarcated in June, July and August, 2005
3.8	OBM 15 Hp		
3.9	OBM 25 Hp		
3.10	Fishing Gear Package for OBM Day Fishing Boats	Under tender negotiation	October or November, 2005
3.11	IBM Day Fishing Boat 30ft (Boat)	CEY-NOR	By the end of April, 2006
3.12	IBM Day Fishing Boat 30ft (Engine)		
3.13	Fishing Gear Package for IBM Day Fishing Boats	Under tender negotiation	October or November, 2005

Source: JICS

CEY-NOR started repair services on the damaged fishing boats and OBMs during a six month period immediately after each Workshop Container with Tools was distributed to the designated destination.

As CEY-NOR started boat manufacturing, 275 Traditional Boat units and 50 of the OBM Day Fishing Boat units were completed during the two weeks after the end of April. Due to a shortage of stock area in the CEY-NOR's boat yard and delay of the distribution time of Fishing Gear Packages, CEY-NOR intends to start distribution of the boats to their destinations, though the distribution combined with OBM and Fishing Gear Package was planned in the initial stage.

3) Recommendations

Recommendations are summarized in the following three points:

- In order to accelerate repair services to the damaged fishing boats and OBMs by CEY-NOR, it is recommended that JICS should promote reduction of distribution time of the Container type workshops and the Spare Parts for Suzuki Engine through negotiations with the suppliers concerned;
- As the Fishing Gear Packages distributed by the Non-Project Grant Aid respond to one part of the fishing gear used annually by the fishing boats and since fishermen have more capability to acquire the fishing gear rather than the fishing boats, immediate distribution of Traditional Boats even without Fishing Gear Packages is appropriate in order to supply the most basic equipment to fishermen; and
- Contrarily, OBM Day Fishing Boats should be distributed with OBMs in consideration of the methods of utilization. It is highly recommended that JICS promote adjustment of manufacturing schedules of the OBM Day Fishing Boats in accordance with the supply schedule of OBMs with CEY-NOR.

(3) Equipment to Support the Fishery Activities

1) Planning Process and Selection Criteria

Container type ice plant & cold storage (Item 4) and Freezer truck (Item 5) were selected as components for supporting and encouraging fishery activities in relation to the equipment to recover the fishery activities under the Japanese Non-Project Grant Aid. Both pieces of equipment are utilized by CFC in the course of its regular activities, including assistant services of ice sales for fishing and fish marketing purposes and collection & sales of fish mainly for domestic market.

The distribution program was planned by CFC under the guidance of DFAR of MOFAR in consideration of the distribution destinations of the equipment to recover the fishery activities under the Japanese Non-Project Grant Aid and CFC's logistic network in local areas. Distribution procedures of the equipment are supervised and monitored by CFC. The capacities of the Containerized Block Ice Plant and Containerized Cold Storage were determined in consideration of the following factors:

- CFC's operation status of ice plants of 5 to 10 ton/day in local area; and
- Suitable capacity in relation to the size of a regular shipping container (advantages in smooth transportation, installation, etc.).

The size of the Freezer truck was determined in consideration of the size of the freezer trucks which CFC utilized in regular operation. The distribution program is shown in Table 7.

In comparison with the original distribution plan of the equipment concerned, some destinations are reviewed due to the following reasons:

- With regard to Containerized Cold Storage, the storage demand in Puranawella is evaluated as more than that in Ambalangoda and the emergency to arrange the storage capacity in Mirissa and Tangalle is evaluated higher than that for an additional plant for Galle and Trincomalee through CFC's further investigations and, because Puranawella, Mirissa and Tangalle are located in a fishery harbor area; and
- With regard to Insulated Refrigerator Trucks, the fish marketing demand in Hikkaduwa is evaluated as more than that in Kalametiya through CFC's further investigations and, because Hikkaduwa is located in a fishery harbor area.

CFC plans to install the equipment concerned as shown in Table 5. Although both of the Containerized Block Ice Plants and the Containerized Cold Storages are planned to be directly operated by CFC in the designated locations, the operation by fishermen society has been studied for the Containerized Block Ice Plant and the Containerized Cold Storage for Mullaitivu because of the scarce logistic network of CFC there. Due to this, their location is not yet determined. Thus, the planning process of the equipment to support the fishery activities was generally managed appropriately.

Table 6 Detail Distribution Program of Container Type Ice Plant & Cold Storage and Freezer Truck

Item No.	Name of Equipment	Q'ty	Original Distribution Plan	Present Distribution Plan
4.	Container type ice plant & cold storage			
4.1	Containerized Block Ice Plant	11 plants	Batticaloa, Kalmunai, Pottuvil, Hambantota, Ambalangoda, Beruwala, Mullaitivu : each 1 unit Galle, Trincomalee : each 2 units	Same as original plan (Remark 1)
4.2	Containerized Cold Storage	12 plants	Batticaloa, Kalmunai, Pottuvil, Hambantota, Ambalangoda, Beruwala, Mullaitivu, Kirinda : each 1 unit Galle, Trincomalee : each 2 units	Batticaloa, Kalmunai, Pottuvil, Hambantota, Puranawella, Beruwala, Mullaitivu, Kirinda, Mirissa, Tangalle, Galle, Trincomalee : each 1 unit
5.	Freezer truck			
5.1	Insulated Refrigerator Trucks for the Transport of Wet Fish	60 units	Trincomalee, Batticaloa, Kalmunai, Pottuvil, Hambantota, Ambalangoda, Mullaitivu, Galle, Tangalle, Mirissa, Puranawella, Valaichchenai, Kalametiya, Kudawella, Negombo : each 4 units	Trincomalee, Batticaloa, Kalmunai, Pottuvil, Hambantota, Ambalangoda, Mullaitivu, Galle, Tangalle, Mirissa, Puranawella, Valaichchenai, Hikkaduwa, Kudawella, Negombo : each 4 units

Remark: Containerized Block Ice Plants for Galle will be relocated to Hikkaduwa and Mirissa within six months after installation because the permanent ice plant will be constructed in Galle Fishery Harbor through its rehabilitation.

Source: CFC

Table 7 Location Plan of Container Type Ice Plant & Cold Storage

Item No.	Name of Equipment	Distribution Destination	Location Plan
4.	Container type ice plant & cold storage		
4.1	Containerized Block Ice Plant	Batticaloa	Batticaloa Anchorage
		Kalmunai	Saintamaruthu, approx. 2 km form Kalmunai
		Potuvil	Ulla, approx. 2 km form Potuvil
		Hambantota	Hambantota Anchorage
		Ambalangoda	Ambalangoda Anchorage
		Beruwala	Beruwala Fishery Harbor
		Mullaitivu	Under planning
		Galle	Galle Fishery Harbor
		Trincomalee	Trincomalee Fishery Harbor
4.2	Containerized Cold Storage	Kirinda	Kirinda Fishery Harbor
		Mirissa,	Mirissa Fishery Harbor
		Tangalle	Tangalle Fishery Harbor
		Puranawella	Puranawella Fishery Harbor
		Others	Same as Containerized Block Ice Plant

Source: CFC

2) Procurement & Distribution Process

Procurement of the equipment has been supervised by JICS. The present status of the procurement is shown in Table9. The Container type ice plant & cold storage is transported to the designated location by the supplier determined through a tender. CFC plans to start operation of the equipment immediately after its installation.

Table 8 Present Status of Procurement of Container Type Ice Plant & Cold Storage and Freezer Truck

Item No.	Name of Equipment	Supplier	Prospected Distribution Time
4.	Container type ice plant & cold storage		
4.1	Containerized Block Ice Plant	To be determined by the tender early in June, 2005	Prospectively, October or November, 2005
4.2	Containerized Cold Storage		
5.	Freezer truck		
5.1	Insulated Refrigerator Trucks for the Transport of Wet Fish	To be determined by the tender early in June, 2005	Prospectively, October or November, 2005

3) Recommendations

Recommendations are summarized in the following two points:

- Concerning the review of the location of the Containerized Cold Storages, though their reasons will be justified, it is highly recommended that CFC should announce the situation to JICS immediately. Considering that the total distance for inland transportation from Colombo respectively to Ambalangoda, Galle and Trincomalee is slightly longer than that from Colombo to Puranawella, Mirissa and Tangalle, though it will be still in negotiable range in technical negotiations during tender evaluation, it is recommended that JICS should prepare for this in advance; and
- Concerning the location of the Containerized Block Ice Plant and the Containerized Cold Storage for Mullaitivu, it is highly recommended that CFC should determine the location site by the end of May in order to let JICS conduct effective technical negotiations during tender evaluation in the beginning of June, 2005.

(4) Other Components of Non-Project Grant Aid

Progress concerning Japanese Style Fishing Boat (Item 6) and Rehabilitation of Fishery Harbors (Item 7) are reported in Section 3.5 and Chapter 4, respectively.

1.2 Facility Utilization Plan

(1) Operation Status of Fishery Harbors by CFHC

CFHC was originally established in 1972 as a public service organization and became a state enterprise for planning, developing, management and maintenance of fishery harbors, anchorages and shore facilities.

CFHC now operates 12 Fishery Harbors, 7 of which are located in the Southern Region (Hikkaduwa, Galle, Mirissa, Puranawella, Kudawella, Tangalle and Kirinda), promotes the operation of 34 Anchorages, 4 of which are under construction as Fishery Harbors, and conducts dredging works mainly for Fishery Harbor maintenance.

In response to the loan policy of Asian Development Bank (ADB), CFHC has kept the leasing strategy with regard to functional facilities such as ice plants, etc. in comparison with the direct operation of the basic facilities such as auction hall, net mending facility, fuel supply facility, slipway, etc. However, after the tsunami, change of the leasing strategy with regard to functional facilities has been requested by MOFAR, because the fisheries administrative policies after the tsunami intend to operate the fundamental facilities for fisheries activities, especially within 100m from the coastline, by the public sector. ADB basically accepts these fisheries administrative policies.

Table8 shows major charges in the fishery harbors operated by CFHC. Before the tsunami, CFHC intended to increase these charges approximately from 30% to 200% mainly due to expenditure cost inflation. However, based on the fisheries administrative policies after the tsunami, the existing charges shown in the table are maintained.

The financial results (2002 to 2004) of operation of the fishery harbors are shown in Table 8. During these years, these financial results are evaluated as sound. With regard to revenue, the berthing charges dominate in reflection of marine infrastructure and the fuel sales services seem to be profitable in spite of the minimal charge against the purchase cost. With regard to the expenditure, the human resources cost dominate in reflection of infrastructure provision services and the maintenance cost is relatively small in reflection of CFHC's capability for self-service maintenance.

Table 9 Major Charges in the Fishery Harbors operated by CFHC

	Item	Details
1	Entry Charge	5 Rp/entry for Person, Bicycle and Cart, 10 Rp/entry for Motor cycle, Three wheel, etc 25 Rp/entry for Car, Van, Tractor, Lorry, Bus, etc.
2	Berthing Charge for Registered Boats	60 Rp/month for Oru, 115 Rp/month for OBM fishing boat, For IBM fishing boats; 230 Rp/month for 28-29ft, 460 Rp/month for 30-34ft, 690 Rp/month for 35-39ft, 920 Rp/month for 40-44ft, 1,150 Rp/month for 45-49ft, 1,380 Rp/month for 50-54ft, 1,800 Rp/month for 55-65ft
3	Berthing Charge for Non-Registered Boats	86.25 Rp/entry for Oru and OBM fishing boat, For IBM fishing boats; 172.5 Rp/entry for 28-34ft, 345 Rp/entry for 35-65ft
4	Water Charge	For drinking; 0.2 Rp/1 litter, For bathing; 0.2 Rp/100 litters
5	Ice Price	90 Rp/ 50 kg (provisional)
6	Fuel Sales Charge	Purchase cost + 0.5-0.6 Rp/litter

	Item	Details
7	Electricity Charge	149.5Rp/day for light work, 180 Rp/day for heavy work
8	Boat Lifting Charge	1,035 Rp/lift up 28ft, 1,380 Rp/lift above 28ft
9	Pier Charge	35 Rp/day for first 3 days, 50 Rp/day over 4 days
10	Slipway Charge	300 Rp/day

Source: CFHC

Table 10 Financial Results of Operation of the Fishery Harbors by CFHC

(unit: 1,000 Rp)

Item / Year		2002	2003	2004
Total Revenue		47,862	43,165	49,152
1	Berthing Charges	18,272	19,420	19,753
2	Water Charges	4,628	4,093	4,957
3	Entry Charges	4,178	3,582	3,447
4	Fuel Sales Profits	7,164	8,483	11,007
5	Rent Income	5,409	3,011	3,910
6	Others	8,211	4,576	6,048
Total Expenditure		43,176	38,570	47,214
1	Salaires & Wages	29,070	28,984	33,757
2	Water Cost	3,176	2,476	2,513
3	Electricity Cost	3,575	4,276	4,144
4	Maintenance Cost	567	379	550
5	Others	6,788	2,455	6,250
Profit		4,686	4,595	1,938

Source: CFHC

(2) Recommendations

Recommendations are summarized into the following two points:

- Concerning the maintenance of existing charges, though it is justified with consideration to promoting fishery activities in the situation after the tsunami, it is recommended that CFHC should analyze in advance the review & expenditure balance especially in terms of cost inflation and make a request to MOFAR for budgetary assistance, when necessary; and
- Concerning the operation of ice plant, it is recommended that CFHC review the cost & profit evaluation carefully because its operation is of new services based on the fisheries administrative policies after the tsunami. Though the actual operation will be less profitable due to ice price determination with consideration of the promotion factors after the tsunami, the precise evaluation will offer the justification for requesting budgetary compensation from MOFAR, if any.

1.3 Equipment Utilization Plan

(1) Operation Body (CFC)

CFC was originally established in 1964 as a public service organization and became a state enterprise for zonal administration of purchase & sales of fish and support services of ice sales & cold storage operation development of fishery products, commercial fish marketing, etc.

CFC now operates a Colombo refrigeration plant (1,000 tons cold storage, 20 ton/day blast freezer, etc.), 16 regional fish purchasing centers, 48 regional fish sales stalls, several regional ice plants (total 30 ton/day), several regional cold storages, several freezer trucks, etc. thorough its regional services network. Container type ice plant & cold storage and Freezer truck procured by Japanese Non-Project Grant Aid are also in operation in this services network.

Table 12 shows the service-wise financial results (2001 to 2003) of the operation of CFC. With regard to the Other Income, that for Fish Sales is financed by fish export levies (20 Rs per kg), that for Ice Sales comes from crushing charges (5 Rs per 50 kg block) and that for Others come from interest income of long term deposits. By 2001, the Other Income for Fish Sales and Cold Storage shared the fish export levies. Generally, the financial operation has been improved and the services of fish sales and cold storage seem to be profitable and support financial soundness. According to CFC, the Ice Sales service has disadvantages in financial operation because the present scale of ice plants is relatively smaller than what is actually economically feasible.

Table 11 Service-wise Financial Results of the Operation of CFC

(unit: 1,000 Rs)

Item / Services in 2001	Fish Sales	Ice Sales	Cold Storage	Others	Total
Revenue	526,948	12,931	33,369	2,929	576,177
Cost of Sales	425,777	778	232	2,049	428,836
Expenses	80,473	15,517	26,962	71,116	194,068
Operating Profit	20,698	- 3,364	6,175	- 70,236	- 46,727
Other Income	4,670	987	12,174	7,639	25,470
Net Profit	25,368	- 2,377	18,349	- 62,597	- 21,257
Item / Services in 2002	**Fish Sales**	**Ice Sales**	**Cold Storage**	**Others**	**Total**
Revenue	476,006	12,697	47,053	5,632	541,388
Cost of Sales	367,827	219	3,218	4,356	375,620
Expenses	83,273	17,169	28,232	66,199	194,873
1. Administration &Establishment	66,271	16,563	28,185	61,029	172,048
2. Selling & Distribution	15,584	17	23	1,710	17,334
3. Finance & Others	1,418	589	24	3,460	5,491
Operating Profit	24,906	- 4,691	15,603	- 64,923	- 29,105
Other Income	39,597	867	0	7,766	48,230
Net Profit	64,503	- 3,824	15,603	- 57,157	19,125

Item / Services in 2003	Fish Sales	Ice Sales	Cold Storage	Others	Total
Revenue	290,793	13,326	53,072	3,469	360,660
Cost of Sales	232,454	- 55	11,797	2,691	246,887
Expenses	73,107	14,346	29,619	83,642	200,714
1. Administration & Establishment	63,554	14,267	29,032	80,783	187,636
2. Selling & Distribution	8,355	3	525	1,913	10,796
3. Finance & Others	1,198	76	62	946	2,282
Operating Profit	- 14,768	- 965	11,656	- 82,864	- 86,941
Other Income	79,390	437	0	11,887	91,714
Net Profit	64,622	- 528	11,656	- 70,977	4,773

Source: CFC

(2) Equipment Utilization Plan

With regard to the Containerized Block Ice Plant by Japanese Non-Project Grant Aid, CFC plans to calculate a reasonable ice price based on ice production efficiency of the procured equipment. For this purpose, information on electricity consumption for ice production is requested to be provided by the bidders in the tender for the equipment. Though CFC expects the that electricity consumption rate of the procured equipment is suitable for the present ice price of 90 Rs per 50 kg block, CFC intends to settle the ice price the same as the present ice price in consideration of the promotion of fishery activities after the tsunami, under the guidance of MOFAR.

With regard to the Containerized Cold Storage by Japanese Non-Project Grant Aid, the situation regarding charge determination is similar. Even when the calculated feasible charge is higher that the present charge of 4 Rs per kg and per week for storage, CFC intends to settle the charge at even less than the present charge (approximately 10% deduction) in consideration of the promotion of fishery activities after the tsunami, under guidance of MOFAR.

Both of the ice and storage are directly used by CFC for its fish purchase & sales services. Considering that CFC generally put approximate 30% margin against purchased fish in sales and that the recovered fish demand is still greater than the non-recovered fish supply, it may be prospected that CFC's direct use of ice and cold storage contributes to the feasible operation of the equipment concerned. The Freezer trucks are utilized in this text and planned to be operated for approximately 5 round trips per week between the distribution destinations & the regional fish purchasing centers and regional fish sales stalls.

(3) Recommendations

Recommendations are summarized into the following three points:

- Concerning the operation of the Containerized Block Ice Plant and the Containerized Cold Storage, it is recommended that CFC carefully review the cost & profit evaluation,

based on each plant level, because the ice production cost and cold storage operation cost may be higher than those of the present plants. Though the actual operation will be less profitable due to ice price & cold storage charges determination with consideration of the promotion factors after the tsunami, the precise evaluation will provide the justification for requesting budgetary compensation from MOFAR, if any;

- Considering the present advantages with that the recovered fish demand still greater than the non-recovered fish supply, it is highly recommended that CFC consult with JICS for the acceleration of procurement of the Container type ice plant & cold storage and Freezer truck in order to take these business opportunities; and
- As CFC will acquire relatively large quantities of equipment, through the Japanese Non-Project Grant Aid, such as the Container type ice plant & cold storage and the Freezer truck, it is highly recommended that CFC immediately prepare for the recruitment of qualified operators, especially from the viewpoint of having maintenance aware minds and being disciplined in those specific pieces of equipment because of the general difficulty of finding such operators.

1.4 Distribution and Repair of Fishing Gear

(1) Operation Body (CEY-NOR)

CEY-NOR was originally established in 1967 as a public service organization and became a public corporation for manufacturing and supplying fishing nets, fishing boats and various types of fishing gear. CEY-NOR operates a boat construction yard in Colombo, two fishing net factories at Weerawila and Lunuwila, 6 regional retail outlets for sales of fishing gears, etc.

The Container type workshop and Materials to repair and replace traditional boats through the Japanese Non-Project Grant Aid are utilized by CEY-NOR to repair and replace the damaged fishing boats and engines.

Table 13 shows the financial results (2001 to 2003) of CEY-NOR. As, in 2001, the long term loan written off was valued as 13,114,886 Rs of the financial & other expenses contributed to the financial advantages, financial operation of CEY-NOR had been unsuccessful. According to its Annual Report of 2003, the causes of this situation were evaluated as ineffective operation of the fishing net factories due to delay of procurement of raw materials and less utilization of the boat construction yard due to less orders. In 2003, only 203 fishing boats, composing of 1 multi-day boat, 1 day-boat, 171 ORUs and 30 Wallam/Theppams, were constructed. At the end of 2004 before the tsunami, the production target of the boat construction yard in 2005 was only 100 boats. The role as a public company to supply fishing gear at reasonable prices and challenge to manufacture local-made fishing nets may be one of the causes for the oppression of its financial operations. However, since the tsunami, its operation circumstances have changed remarkably. Due to huge numbers of orders for new construction of various types of fishing

boats, the boat construction yard has been fully utilized since the beginning of 2004. Its boat construction capability will be proved by the results of construction of 275 Traditional Boat units and 50 units of the OBM Day Fishing Boats for the Japanese Non-Project Grant Aid during the two weeks after the end of April 2004. This situation of operation will improve the financial operation of CEY-NOR very remarkably.

Table 12 Financial Results of Operation of CEY-NOR

(unit: 1,000 Rs)

Item / Year	2001	2002	2003
Revenue	120,200	121,642	113,636
Cost of Sales	107,403	120,308	98,801
Gross Profit	12,797	1,334	14,835
Other Operating Income	23,191	17,313	7,909
Selling & Distribution Expenses	8,566	6,129	12,973
Administration Expenses	27,474	24,830	24,767
Other Operation Expenses	2,075	280	379
Operation Profit	- 2,127	- 12,592	- 15,375
Financial and Other Expenses	10,782	- 5,364	- 4,360
Net Profit	8,656	- 17,956	- 19,735

Source: CFHC

(2) Plan to Repair the Fishing Boats and Engines

Immediately after distribution of the Container type workshop at the location designated by the assistant director of DFAR of MOFAR, CEY-NOR plans to start repair services on FRP fishing boats and engines free of charge using the Container type workshop and the Materials to repair and replace traditional boats for damaged fishing boats and engines which are justified by an Entitlement Card and under guidance of the fishermen society and the assistant director concerned. For this purpose, CEY-NOR contracted with JICS for labor charges during the six months for these repairing services. According to the average cost of spare parts for OBMs estimated by CEY-NOR, approximately 300 OBMs will be repaired using the OBM spare parts supplied by Japanese Non-Project Grant Aid.

Even six months after the distribution of the Container type workshop, CEY-NOR plans to continue these repairing services as long as there remains stock of the materials supplied by Japanese Non-Project Grant Aid or other such materials supplied by other donors or NGOs.

(3) Recommendations

Recommendations are summarized into the following three points:

- As the present situation of operation of the boat construction yard was introduced by sudden demand caused by the tsunami, it is recommended that CEY-NOR should prepare in advance for adjustment of labor recruits in consideration of system operations for regular demand;

- In order to effectuate the related repairing services, it is recommended that CEY-NOR establish repairing services programs, especially at the viewpoint of efficient labor inputs, immediately in consideration of the prospective delivery schedule of the Container type workshop. It is also highly recommended that JICS inform CEY-NOR of the latest prospective delivery schedule of the Container type workshop and promote adjustment of delivery programs of the Container type workshop during tender negotiations with bidders; and
- As mentioned formerly, the time lag between the prospected delivery time in July 2005 for spare parts of Yamaha OBMs and that in November, 2005 for spare parts of Suzuki OBMs, will disturb the efficiency of repairing services by CEY-NOR. It is highly recommended that JICS promote adjustment of delivery programs of spare parts of Suzuki OBMs with the supplier at the standpoint of introduction of partial delivery of the selected spare parts packages suitable for part initiation of the repairing services for these OBMs in consultation with CEY-NOR.

2 Review and Analysis of Kirinda Fishery Harbor

Table 14 shows the estimated fish landing in Kirinda Fishery Harbor, the two week fish landing survey conducted by CFHC in August, 2004 indicates a fish landing of approx. 1,095 tons annually there. In order to grasp the present situation after the tsunami, fish landing and marketing surveys were conducted by the Project Team.

Table 13 Estimated Fish Landing in Kirinda Fishery Harbor

(unit: ton/year)

Year	1995	1996	1997	2002	2003	2004
Fish Landing	2,979	5,568	8,256	5,355	2,220	3,611

Source: CFHC

Questionnaire surveys to fish buyers and fishing boat owners at the harbor were carried out over the period of 3 days by using local surveyors. The surveys were carried from 9 to 11, May in 2005 with interviews of 60 fish buyers. Table 15 below shows the summary of fish landing quantity and the value in these surveys.

Table 14 Fish Landing Quantity and Value in Kirinda Fishery Harbor from 9 to 11, May, 2005

Fish Species	Quantity		Average Price	Total Value
	kg	%	Rp/kg	Rp
Spanish Mackerel	1,412	8	234	352,650
Skipjack	4,965	28	129	627,120
Yellowfin tuna	6,511	36	209	1,386,550
Horse mackerel	1,825	10	200	395,380
Other bloodfish	989	6	62	97,700
Sharks & Rays	1,302	7	94	121,445
Rock fish	116	1	93	10,370

Fish Species	Quantity		Average Price	Total Value
	kg	%	Rp/kg	Rp
Shore sein varieties	0	0	-	-
Prawns	0	0	-	-
Pothubti	5	0	80	400
Linna	292	2	100	28,960
Sardines / Herrings	20	0	120	2,400
Bollo	0	0	-	-
Kalawenno	500	3	138	68,550
Total amount	17,937			3,091,525

Questionnaire surveys were also conducted in relation to the trading & distribution process and usage conditions in Kirinda Fishery Harbor after the affect of the tsunami, and included interviews of boat owners about fishery activities. The results of the questionnaires are summarized as shown below.

- Among respondents, 70 % were wholesalers, 20 % were retailers and the remainder were fishing boat owners. 60 % of their residencies are in the Kirinda and Hambantota area and 20 % from the Tissamaharama area.
- According to the survey results, 15 to 20 tons of fresh fish were landed and sold during 3 days in the Kirinda Fishery Harbor, which is estimated to be 100 to 110 tons monthly and 1,000 to 1,200 tons annually. This estimation appears to resemble to the estimated result of fish landing survey conducted by CFHC in August 2004.
- During the period of the surveys, there was an average of 10 multi-day fishing boats and 12 one-day OBM fishing boats anchoring at the harbor basin. At this time of the year most of multi-day fishing boats leave for fishing in the late evening and return early morning. One-day fishing boats leave in the early morning and return before noon. This is a typical operation scene of the fishermen in this region during this time of year. Due to the temporary siltation solution , the number of multi-day fishing boats seems to be greater than a usual season.
- Most fishermen sell pre-cooled fresh fish at the landing site for entry to distribution chains. The destination of fish are mainly divided to two consumption areas. The first is the area called “the Hill Country”, which includes the Badulla and Ratnapura Districts. This market accepts 80 % of fish sold in Kirinda Fishery Harbor. The other is the Hambantota District, where less than 15 % of fish is marketed.
- The major fish species dealt are categorized as “Blood Fish” such as king mackerel, skipjack, yellow-fin tuna, which consists more than 85 % of the total catch. Sharks and Rays are sold without fins to local people. Additionally, Linna, Sardines and Kalawenno are sold to local fishermen for use as bait for pole and line fishing.
- The Hill Country is located approx. 70 km inland from the Kirinda Fishery Harbor. The majority of the distributors from the Hill County use insulated trucks owned by boat-owners. In contrast, local buyers commonly use three-wheelers or motorbikes. These local buyers purchase fresh fish in Kirinda Fishery Harbor on an almost daily

basis. In addition, there were no buyers from Colombo, but one wholesaler from east Ampara who bought yellow-fin tuna and skipjack.

- Before the tsunami, almost all the buyers obtained flaked ice from the ice plant in Kirinda Fishery Harbor. Now however they purchase ice from one private company, supplying plate ice from the Tangalle area.
- The following characteristics were identified during the interviews:
  - Demand of stable supply of Ice;
  - Repair of the auction hall;
  - Necessity of dredging silt accumulated in the harbor basin; and
  - Necessity of stable supply of fuel and water.

In consideration of the above survey results, the Kirinda Fishery Harbor is still one of the active fishery harbors in the Southern Region. However, due to siltation, IBM fishing boats have not gained easy access into its harbor basin rather than OBM fishing boats. Although multi-day fishing boats utilize this harbor now, the prospect of this situation in one years time is not optimistic.

On the other hand, a wide bank of approx. 2,000 km^2 extends to the east of Kirinda Fishery Harbor, and offers a prominent bottom fishing ground. Considering the fact that hand line fishing or bottom long line fishing by OBM fishing boats are appropriate for such a fishing ground, the Kirinda Fishery Harbor will maintain an important role as a fishery harbor mainly for OBM fishing boats for a long time. Though rehabilitation of the Kirinda Fishery Harbor is not included in the scopes of Japanese Non-Project Grant Aid, repair of the roof of the auction hall as the most basic facility for fishery activities there is conducted in the activities of this Project.

3 Recommendations for Introduction of Japanese Style Fishing Boat

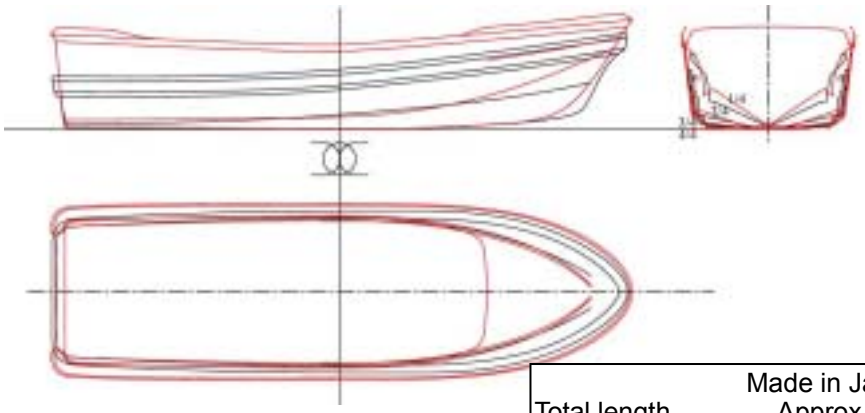
3.1 Introduction of Japanese Style OBM Fishing Boat

(1) Observations and Findings

1) Comparison of Actual Hull Design of GRP Small Boats for OBM

With regards to GRP small boats, evaluation of the feasibility of introduction should be based on actual boats of commercial produce when the situation is not a trial introduction without expectation of success or a challenge of the development of a new hull design based on a long-term study. This is because boats on the commercial catalogue are only available due mass production systems, especially in Japan.

Figure 1 shows the profile, plan and section of GRP small boats of similar length for OBM for marine fisheries, which are generally made in Japan (indicated with a black line) and in Sri Lanka (indicated with a red line).



	Made in Japan	Made in Sri Lanka
Total length	Approx. 6 m	Approx. 6 m
Breadth overall	1.63 m	1.75 m
Depth 0.63 m	0.85 m	

Remarks: [1)]As the dimensions of the Sri Lankan made boat were measured from an actual boat, the drawing may have small deviations.
[2)]The dimensions of the boat made in Japan are based on the catalogue, because such boats are manufactured by mass-production and applied with catalogue sales. Generally it is difficult to modify the dimensions of the boat in short period.
Source: Project Team

Figure 2 Comparison of Actual Hull Design of GRP Small Boats for OB

2) Characters of GRP Small Boats for Marine Fisheries from the Standpoints of Form and Hull Design

Characters of GRP small boats for marine fisheries for form and hull design is summarize in Table 15.

Table 15 Characters of GRP Small Boats for Marine Fisheries from the Standpoints of Form and Hull Design

Form & Hull Design	Character
Non-sharp section in bow (Character of Japanese style)	In the case of hydroplane, the boat runs with a rising bow and this bow shape doesn't relate with the cutting waves because there is no plowing through the waves.
Sharp section in bow (Character of Sri Lankan style)	It is a general characteristic of the boats with low speed and large loading. The sharp section in the bow plows through the waves with less propulsive resistance. On the contrary, the boat has a "ship a wave" because of the lower reserve buoyancy in the bow.
Rise up floor from middle to stern part. (Character of Japanese style)	It decreases water punching from the bottom at high speed running and makes for a comfortable ride. However, as the large rise up floor decreases lifting force, it obstructs speed-up.
Flat bottom (Character of Sri Lankan style)	Less disadvantages at low speeds. Loading capacity increases in proportion to under the water volume in the case of a flat bottom.
Small depth at mid-ship (small freeboard). (Character of Japanese style)	It is not necessary to have a large freeboard and depth where the boat is operated in calm sea and with small amounts of loading. The low depth decreases hull weight and contributes to easy net hauling.
Large depth at mid-ship (large freeboard). (Character of Sri Lankan style)	High seaworthiness is maintained as seawater doesn't easily get into the boat. Net hauling is relatively difficult because of the high bulwark.

Remark: Freeboard means a distance between water surfaces to top of bulwark (gunwale).

3) General Relations between Performance and Form of GRP Small Boats

General relations between performance and form of GRP small boats are summarized in Table 16.

Table 16 General Relations between Performance and Form of GRP Small Boats

Item	Features
Speed	In the case of hydroplane, the flat bottom from mid-ship to stern and the lightweight is advantageous. On the other hand, some rise up floor needs to be applied in case of decreasing water punching from the bottom in high speed. This is basis for Japanese style boats because high speed with high power is a tendency in Japan due to transportation of fresh fish in a short time.
Stability	Wide beam (breadth) boat has good stability in general. These features are generally observed on the boats made in Sri Lanka in accordance with the sea conditions.
Seaworthiness	V sharp in bow section is advantageous in the case of a low speed boat. However, it is necessary to maintain a large sheer and/or large flare in the bow in order to compensate the decreased reserve buoyancy, when excessively V sharp in the bow section. These features are generally observed on the boats made in Sri Lanka. Seaworthiness increases in proportion to scale and length of boat.The 8 meters of Japanese style boats has advantages over the 6 meters of the boats made in Sri Lanka.

4) Comparison of the Features of Japanese Style and Sri Lankan made GRP Small Boats for Marine Fisheries

<u>Japanese Style Boats</u>

- Fishing boats have been generally demarcated into OBM boats to be used in calm sea or bay area and IMB boast to be operated off shore.
- Though speed, easiness of working on board, comfortable riding, etc. are considered important, not so much attention is paid to loading capacity. The flat bottom area from mid-ship to stern is used for the effect of hydroplane. Though the wide flat area is advantageous for increasing speed, a rise up floor is adopted to decrease punching from the bottom in order to maintain comfort when ridding at high speed.
- Sheer in bow and also freeboard are relatively small because the boat is mainly operated in calm sea area. Low freeboard, consequently, contributes to easy hauling net.
- Requirements of high speed encourage lightweight hull construction.
- According to the above reasons, the boats made in Japan as Japanese style have the features of lightweight of hull, relatively long hull, and narrow beam (width) and depth of hull.

<u>Boats made in Sri Lanka and the circumstances of utilization</u>

- In the Southern Region in Sri Lanka, GRP fishing boats with OBM are of 6 meters in length and mainly operate floating gill net fishing. The boats catch approx. 100 kg of small pelagic fish per day during approx. 9 hours operation (3 hours of fishing and 6 hours of navigation). The boats have large freeboard in correspondence to high

waves and occasionally catch up to 1,000 kg. The boats have a large sheer in the bow in order to increase seaworthiness in rough seas.

- In order to plow through the waves, a V sharp in the bow section is applied.
- As the power of an OBM is mainly 15 Hp or 25 Hp, speed is of 8 to 12 knots (approximately 15 km to 22 km per hour). This speed is lower than that used in Japan. The flat bottom therefore doesn't affect so uncomfortable a ride because of the low speed, and it contributes to an increased loading capacity.
- Original design of the existing GRP boats with OBM was introduced in the 1970s with the collaboration of FAO and it has been modified and developed over the period since then. Fishermen now place reliance on these boats. By showing the actual measurements of Japanese style boats to fishermen in comparison with the existing boats made in Sri Lanka, the fishermen indicate that small depth and freeboard are not suitable with considering less loading capacity and rough sea in the Southern Region.
- As a view of NIFNE, 6 meters in length is the most appropriate dimension for the boat to be operated on sea in Sri Lanka. This is because, incase that length is exceeded, the boat loses ability to plow through the waves in relation with the hull weight, wave length and length of boat, which consequently results in increasing risk in operation.

(2) Evaluations and Recommendations

Evaluations and recommendations are summarized into the following three points:

- The features of GRP fishing boats with OBM operated in the Southern Region in Sri Lanka are summarized as operated by with small power at low speed and they are required to have large loading capacity and seaworthiness. These features are contrary to design concepts required for GRP fishing boats with OBM for marine fisheries in the Japanese Style and made in Japan as actual commercial products, which place a high priority on speed and operational conditions in calm sea with a small loading capacity;
- Therefore, positive reasons for the introduction of Japanese Style GRP fishing boats with OBM for marine fisheries for the purpose of distribution of the boats directly to local fishermen in the Southern Region in Sri Lanka are not justified; and
- It is highly recommended that a long term trial and investigation, if possible with the assistance of a Japanese expert, should be undertaken to identify an appropriate model of the GRP fishing boat with OBM for marine fisheries in Sri Lanka, even when the introduction of Japanese Style GRP fishing boats with OBM for marine fisheries is planned as a trial basis.

3.2 Introduction of Japanese Style IBM Fishing Boats

(1) Background

With regard to the introduction of Japanese Style IBM Fishing Boats, the surveys and evaluation were conducted from the standpoint of a fisheries training boat and on-the-job training boat for a new fishing method. This is because one 50 ft class Japanese style IBM fishing boat named as “KAYTS-MARU” was utilized as a fisheries training boat for a long period at the Tangalle training facilities of NIFNE but it was destroyed by the tsunami, and that the Government of Sri Lanka intends to introduce an on-job training boat for new fishing method in relation to the revitalization of fishery sector.

(2) Fisheries Training Boat

1) Observations and Findings

Through investigation of the drawings and the actual boat damaged, interviews with the users, such as an officer in charge who utilized KAYTS-MARU since he was a trainee at the Tangalle Training Facilities of NIFNE, etc., the following characteristics were discovered in comparison with the other fishery training boat named “Trincomalee” of Tangalle Training Facilities, which is a little bigger than KAYTS-MARU and was made in Sri Lanka:

- Maneuverability: KAYTS-MARU has a wide view from wheel room and good maneuverability due to the effect of a hydraulic steering system and the performance of the rudder. This is one of general characteristics of Japanese Style boats. Accordingly, the boat can easily keep the proper relative position and adequate angle to fishing gear being hauled;
- Sea-worthiness: KAYTS-MARU can navigate relatively well even in rough seas. This is because the reserve buoyancy in the bow is so large due to the large flare that the boat plows through and rides the waves. This is one of general characteristics of Japanese Style boats;
- Fishing capability: As a hydraulic net hauler with an enough heaving power and without net slip, is installed in an adequate position, the hauled net is easily conveyed to aft deck for next paying out care of the wide fishing deck on KAYTS-MARU. The net can be easily stowed, because of the wide space at the aft deck and the small net fences. Deck arrangement facilitates paying out of net at stern deck. As small net fences makes space for trainees to stand safely, they can easily work paying out of net from guarded positions. Consequently, KAYTS-MARU offers a safe training environment to the trainees. Many of these features come from practices in the construction of fishing boats in Japan;
- KAYTS-MARU has an adequate height of bulwark. This is one of general characteristics of Japanese Style boats. Consequently, this arrangement lets trainees engage in fishing training safely;

- As there is enough height in the engine room, it allows trainees to freely move around the engine room during training. This is an essential condition for training in engine operation;
- The hold capacity is sufficient for training purposes even if the capacity is decreased due to part being used for sleeping space; and
- KAYTS-MARU has a sufficient speed even if the power of engine is only 110 Hp. The total volume the oil tank of 2,000 litters, consisting of two of 700 litters and two of 300 litters, is sufficient for the purpose of training.

2) Evaluations and Recommendations

Evaluations and recommendations are summarized into the following two points:

- In consideration of the advantageous points of Japanese Style IBM fishing boats for training purposes, verified by the results of utilization & operation of KAYTS-MARU over a long period, it is highly recommended that the fisheries training boat, that replaces KAYTS-MARU destroyed by the tsunami, should be a 50 ft class Japanese Style IBM fishing boat maintaining the features held by KAYTS-MARU. This is because many of the advantageous features for training purposes of KAYTS-MARU will not be easily realized by the commercial products of similar size of boats made in Sri Lanka presently; and
- Though NIFNE has 6 Regional Training Facilities, the fisheries training boat is distributed to limited facilities, having frequent opportunities for fisheries training and the trainees of other facilities. Accordingly, a new fisheries training boat will contribute to the trainees in the training facilities other than the Tangalle Training Facilities.

3) Utilization Plan of a New Fisheries Training Boat

- Operation and maintenance

  A new fisheries training boat will be operated and maintained by the Tangalle Training Facilities of NIFNE.
- Objectives of training and utilization:
  - Practical training for coastal navigation, seamanship, maneuvering and manipulation of engine, as it becomes more necessary to conduct such training in order to bring up successors for fisheries in the situation after the tsunami;
  - Fishing method training mainly using a drifting gill net for tuna of 4,000 meters in length and occasionally for a long line tuna fishing with tar coated main line as a demonstration;
  - Rescue activity with response to the request from local fishing boats, as KAYTS-MARU could sail even through rough sea because of its sea-worthiness even when the local multi-day type fishing boats could not; and
  - It is recommended that a new training boat should conduct a trial operation for vertical long line fishing, aiming for a research and feasibility study on valuable deep demersal resources at the slope of the continental shelf, by equipping a net cum line hauler.

(3) On-the-Job Training Boat for New Fishing Method

1) Background

With regards to a new fishing method, the Government of Sri Lanka intends to introduce a tuna long line fishing method for deep sea fisheries. This is because a purse seine fishing method became popular in place of the drifting gill net on multi-day fishing boat operations, but this purse seine fishing method is a non-selective fishing method and catches various kinds and sizes of fish other than the targeted tuna. Consequently, useless or abnormal small size fish have been harvested and this became an issue to be solved in protecting the fishery resources against non-selective fishing methods. In consideration of its selective characteristics and some commercial results of success of feasible tuna fishing in 10 days in Sri Lanka, the Government of Sri Lanka intends to promote alternation from a purse seine fishing method to long line fishing by diffusion of that method. Though some fishermen already initiated a tuna long line method commercially by local made fishing boats in Sri Lanka, many fishermen still hesitate to introduce this method by their conservative stance and without recognition of its feasibility. To deal with this situation, the Government of Sri Lanka intends to display its feasibility to fishermen through semi-commercial operation with on-the-job training in this method and including marketing support.

As tuna long line fishing is one of the famous Japanese fishing methods, the Japanese Style fishing boat has naturally gained attention. As, however, some of the commercial operations of this method by local made fishing boats were observed, the surveys and evaluations are conducted focusing both on Japanese Style fishing boats and local fishing boats made in Sri Lanka.

2) Observations and Findings

<u>Aspect in fishing method operation</u>

- A tuna long lone method is generally demarcated to the Japanese system and Florida system. In the Japanese system, fishing lines are generally stocked in small cages and fishing is based on throwing lines at the stern & hauling lines at the bow. This is because hauling procedures are easily investigated from bridge. However, this brings troublesome handling in transferring line cages from the stern side to the bow side, and branch line preparation, etc. and therefore requires a relatively large deck size. Contrarily, in the Florida system, throwing & hauling lines are conducted at the same place generally by using a mechanical reel at the stern. Though hauling procedures cannot be well investigated from bridge, the procedures of line handling becomes simple and deck size can be minimized.
- The fishing boats made in Sri Lanka generally adopted Florida style. This is probably because the Florida style can offer a reasonable size of boat from the standpoint of commercial feasibility of tuna long lining in Sri Lanka and because the fishing procedures are simple and suitable for local fishermen.

Situation of the GRP boat yard in Sri Lanka

- In some yards, the hull and structure of middle class fishing boats (over 50 ft) was designed by associated firms in European countries. Many of the boat yards have separated & air-conditioned factories for fine quality products. In these boat yards, the manufacturing process such as detail designing, female mould, materials, processing techniques, etc. are maintained at an international level.
- 50 ft and 70ft class fishing boats for the purpose of tuna long line fishing have been developed. Several 70ft class fishing boats for tuna long line fishing were constructed under international inspection standards and exported to Seychelles. Generally middle class fishing boats are demarcated for 50 ft class boat for local operation and 70 ft class boat for international operation.

Design comparison

- The design of 50 ft class boats made in Sri Lanka is basically of a displacement type that allows large fish hold capacity and enough fuel oil tank to realize a long period of fishing at sea. On the contrary, Japanese Style fishing boats in similar length don't have either a large fish hold or fuel oil tank in comparison.
- Though in Japan 50 ft class boats are not designed for targeting use for the tuna long line fishing method due to the necessity of a relatively wide deck for complicated line handling, in Sri Lanka the same class boats are designed and constructed for tuna long line fishing because of its practical feasibility in the Sri Lankan sea and the capability of investment of boat owners.

3) Evaluations and Recommendations

Evaluations and recommendations are summarized into the following three points:

- Introduction of tuna long line fishing is justified mainly because the characteristic of selectivity of that method is recommendable for introduction as a substitute for the non-selective purse seine fishing method. The related fishery resources are less vulnerable and fishing pressures expected after introduction are also less in tuna long line fishing than those in a bottom or vertical fishing;
- The introduction of Japanese Style GRP IBM fishing boats for tuna long line fishing is not justified, mainly because of the availability of reasonable fishing boats made in Sri Lanka for that purpose and capability & the feasibility of local investment after introduction; and
- Therefore, with regard to on-the-job training boats for new fishing methods, it is recommended that a 50 ft class fishing boat made in Sri Lanka for a tuna long line fishing be introduced. In consideration of the purposes of on-the-job training onboard and demonstration of its feasibility in commercial operation, introduction of two boats is recommended in order to compare the operation results, encourage competitive minds in operation and the stability of fish landing to the marketing support sector.

4) Utilization Plan of On-the-Job Training Boat for Tuna Long Line Fishing

- On-the-job training boats for tuna long line fishing are planned to be operated in relation with CFC. This is because the type of tuna harvested by these boats should be marketed as export or high value local consumption due to its characteristics, and it is essential that this be supported by reasonable marketing facilities such as a fine refrigeration plant. Among the concerned Sri Lankan Government sectors, only CFC can offer this type of refrigeration plant. The CFC Refrigeration Plant in the Galle Fishery Harbor, is planned to be constructed under Japanese Non-Project Grant Aid concerned, is also planned to be related with the usage of these boats.
- For the purpose of operation of these on-the-job training boats for tuna long line fishing, a new state enterprise is planned to be organized by the end of 2005 as a subsidiary body of CFC under the same law for establishment of CFC or a new law, if deemed necessary.
- Operation plan considered by CFC is as follows:
  - Two or three groups of fishermen consisting of 8 persons are hired for each fishing boat under a new state enterprise and are required to compete in results of fishing based on the possibility of exclusive operators for that fishing boat in the near future; and
  - CFC plans to buy all the types of tuna harvested by these fishing boats and deal it in demarcation of the export market and CFC's products for the local market. This is because the effective utilization of tuna harvested is realized by marketing efficiently low-value fish that will not be avoided in fishing and fish handling, to the appropriate local market.
- It is highly recommended that CFC collaborate with NIFNE in operation of these on-the-job training boats for tuna long line fishing because it would be beneficial to adopt the know how of NIFNE in the on-the-job training programs & procedures and the diffusion by introduction of these boats will be expanded through NIFNE network.
- It is highly recommended that CFC establish an organization structure, especially regarding the manning schedule, and analyze economic feasibility in detail of operations of these on-the-job training boats for tuna long line fishing as soon as possible in order to assure an appropriate operation of these boats.
- It is recommended that CFC prepare, as soon as possible, for the recruitment of qualified fishermen, especially those having practical fishing experience, fine fishing techniques, maintenance aware minds and being disciplined, for the operation of these boats because of general difficulty of finding such fishermen. Some of the skilled fishermen especially for tuna long line fishing are recommended to be hired by CFC immediately for preparation of an on-the-job training program, detail operation schedule, and evaluation of the boats to be constructed during construction period, etc.

ANNEX 4-1 Questionnaire Format for the Tsunami Camp Household Survey

1.	**GENERAL INFORMATION**				
1.1	Name & address of the camp				
1.2	Home number				
1.3	Name of the head of household				
1.4	Gender & age				
1.5	Race & religion				
1.6	Address before the tsunami				
1.7	GN division Before the Tsunami				
1.8	Number of family members				
1.9	Number of Children	Schooling	1-5 Years	Infants	Total
2.	**DAMAGE DUE TO TSUNAMI**				
2.1	House	Fully		Partly	
2.2	Household Items	Electricity	Furniture		Other
2.3	Other assets	Vehicle	Jewelry		Cash
2.4	Total value of property loss				
3.	**INCOME - RELATED INFORMATION**				
	Employment before the tsunami	Member	Job/Enterprise	Monthly income/ profit	
3.1	Employment after the tsunami	Member	Job/Enterprise	Monthly income/ profit	
3.2	Present employment situation	Member	Restarted Or not	Reasons if not started or partly started	
3.3	Present monthly family income	Government Grants			
		Food allowance by Government			
		Samurdhi			
		Grants from other sources			
		Family member's income			
		Total monthly income			
3.4	Monthly family expenditures	Food			
		Clothing			
		Health			
		Education			
		Other			
		Total monthly expenditure			

3.5	Loss of income generating equipment	Items lost/damaged		Value	
		Total Value			
3.6	If you wish to start an enterprise again, what do you need?	Government grants	Bank Loans	Own money	Other
4.	**HOUSEHOLD EQUIPMENT & FURNITURE**				
4.1	Equipment and furniture present at the temporary house	Electrical	Furniture		Other
4.2	Additional equipment and furniture needed in the house	Electrical	Furniture		Other
4.3	Type of Cooking	Before tsunami			
		At present			
		Preferred method			
4.4	What items do you need for cooking?				
5.	**EDUCATIONAL NEEDS**				
5.1	Number of children schooling				
5.2	Assistance needed for their education	Clothing	Private Education	Transport	Other
6.	**PROBLEMS RELATED TO CAMP LIFE**				
6.1	Housing				
6.2	Water				
6.3	Toilets				
6.4	Electricity				
6.5	Health				
6.6	Space for cooking				
7.	Any other problem related to camp life				
7	**INSTITUTIONAL BUILDINGS**				
7.1	Do you have a resident's organization in the camp				
7.2	If yes, write in the activities sponsored by the organization				
7.3	Suggestions for strengthening the organization				

7.4	If no to answer 7-1, do you think it is important to have an organization in the camp?			
7.5	How can the organization help improve the present camp conditions?			

ANNEX 4-2 Results of the Refugee Camp Household Survey

Project Title	:	Refugee Camp Management Support Pilot Project
Location	:	Gurubewila (Mahanama) and Pathegama refugee camps in Weligama Division in Matara District
Beneficiaries	:	Camp residents in Gurubewila and Pathegama camps
Survey duration	:	between the 3rd and 11th of July 2005
Interviewed by	:	The coordinators of the three pilot projects named "Recovery Rehabilitation and Development Project for Tsunami affected area in Southern Province", Mr. Kelum Nishantha, Ms. Deepika Kumari, Ms. Chamalie Jayalath

Background

Since the tsunami struck on the 26th of December , 100 families of Gurubewila, Pathagama, Mahaweediya and Paranakade GS Divisions of Matara District were displaced from their homes since their homes were destroyed. Among these tsunami victims, nearly 350 people from 97 families are living in Gurubewila (66 families) and Pathegama (31 families) camps in Weligama Division of Matara District even six months afer the tsunami hit.

Methodology

The coordinators visited 97 house holders in Gurubewila and Pathagama Camps in Matara district and collected information through direct personal interviews and interviewees filled out a standard survey. Equipment present at the temporary houses, equipment needed, type of cooking equipment families owned before and after the tsunami, problems related to camp life and suggestions on institutional buildings were major topics of the survey.

Findings

Number of families

Name of the camp	No. of families	No. of family members
Gurubewila	66	233
Pathegama	31	117

Total number of families interviewed in both camps was 97. In Gurubewila (66 families) and Pathegama (31 families).

Education Assistance Needed

There are 45 children in Pathegama and 96 children in Gurubewilla camps. Among these, 64 are schoolchildren in Gurubewiila and 39 are schoolchildren in Pathegama. 35 families need clothing, 26 need private education & 42 families need transportation,assistance. In other words, all families having schoolchildren are in need of clothing, private education and transportation.

Two dropouts were reported in Gurubewila camp and one in Pathagama. The parents of these children are unable to afford for their child's education after the tsunami hit.

Equipment in the temporary houses

Furniture items

Name of the camp	Item				
	Chairs	Tables	Beds	Cupboards/ Wardrobes	Other
Gurubewila	159	9	124	1	plate rack
Pathegama	104	23	54	2	

In both camps, people lost everything including the homes they occupied, including their furniture and electrical equipment. There was not furniture found in Gurubewila houses, except few household items, such as two chairs and two beds donated by Loadstar. Only few householders (nine) in Gurubewila camp have made some tables using the wood which was procured for temporary house construction.

Save the Children's Organization donated 23 tables for educational use to families in Pathagama camp having schoolchildren. Loadstar Company donated two chairs and two beds to households in both camps. Except for three families with infants, other families do not have a wardrobe/cupboard in their houses, so they have no choice but to keep their clothes in cardboard boxes.

Electrical items

Name of the camp	Item			
	Fan	Iron	Heater	Other
Gurubewila	0	2	0	Radio
Pathegama	4	6	14	Radio

Since wiring capacity is weak in Gurubewila camp, for safety reasons, management does not allow any household to use electrical equipment. In camp Pathagama, 4 families with babies have fans, six families with schoolchildren have irons, and 14 families have water heaters. Other households are not in the economic situation to buy such items although they are in need of them since their livelihood has been damaged by the tragic tsunami disaster.

Equipments needed for the temporary houses

Electrical items

Name of the camp	Item		
	Fan	Iorn	Heater
Gurubewila	60	48	43
Pathegama	26	24	12

As temporary houses are covered with aluminum sheets and are built much closer to each other, temperature inside the houses is high. As trees have been cut down for the construction of new temporary houses, the situation is quite unpleasant. The majority of women, babies & old people stay in these temporary houses during the daytime; they are

victims of high room temperatures. If fans can be provided to them, this problem can be mitigated. So 60 families in Gurubewila camp and 26 families in Pathegama camp are in need of fans.
48 families in Gurubewila camp, 24 families in Pathegama are in a need of irons for their day-to-day activities. For example, families having schoolchildren, need to iron school uniforms. 20 families in Gurubewila camp and 18 families in Pathegama camp have schoolchildren.

43 families in Gurubewila camp, 12 families in Pathegama are in need of heaters for boiling water. All families have kerosene cookers but they are not easy to use and so they would like to have heaters for their houses. In addition to these items, some families are in need of radios, blenders, rice cookers & toasters.

Name of the camp	**Item**			
	Chairs	Table	Cupboard	Bed
Gurubewila	48	60	63	44
Pathegama	12	20	28	23

Households lost their furniture to the tsunami. 48 families in Guubewila
and 12 families in Pathegama need chairs for their homes.. 80 families in both camps need tables. Moreover, in both camps, 91 families need cupboards and 67 families need beds. Furniture items requested include mainly cupboards and tables. At present, they keep their clothes in small cabinets inside their homes. Families with infants & schoolchildren are going through much more difficult times because of the lack of proper furniture.

Most families need tables for educational purposes for their children' and to keep pots after cooking. In addition to these items some family members have asked for plate racks, cloth racks and mirror tables.

Method of cooking before the tsunami and at present & preferred method of cooking

	Gurubewila camp			
	Gas	Kerosene	Electricity	Firewood
Before tsunami	32	13	1	32
At present	2	61	0	1
Preferred method	62	0	0	0

	Pathegama camp			
	Gas	Kerosene	Electricity	Firewood
Before tsunami	27	2	2	6
At present	0	29	0	1
Preferred method	30	0	0	0

As can be observed in the above figures, the majority of people have used gas & firewood for cooking before the tsunami. Only a few households have used kerosene and electricity. At present all women, except for 4, use kerosene cookers donated by NGOs immediately after the tsunami. However, those kerosene cookers are now in bad condition. Moreover,

kerosene can be tasted in the meals and smoke creates breathing problems inside houses since women are now cooking inside their homes. These problems have especially affected households with infants & elderly people. Therefore it can be said that women face much difficulty when cooking. All households in both camps preferred gas as their cooking method since it is easy to handle and safe.

Problems related to camp life

Drinking water

	Good quality	Bad quality	Sufficient	Insufficient
Gurubewila	95.4 %	4.5 %	100%	-
Pathegama	83%	16%	96%	4%

In both camps drinking water is in good condition and sufficient. Therefore householders face no problems with the drinking water.

Bathing water

	Good quality	Bad quality	Sufficient	Insufficient
Gurubewila	9%	91%	42%	57%
Pathegama	52%	48%	13%	87%

Although there is no problem with the drinking water, both camps have problems with bathing water. In Gurubewila, the quality of the bathing water in the well inside the camp is not good; the water smells bad and is muddy. Therefore residents walk 200m away from the camp to bathe. Those particularly affected by this are elderly people and children. In Pathagama camp, the current bathing water conditions are not satisfying their needs. Thus, both camps are in great need of a new well.

Problems Related to Camp life

Housing Problems

	Lack of privacy	Insufficient space	Feeling Heat	Getting wet
Gurubewila	38	39	55	8
Pathegama	15	25	29	4

In both camps, the high temperature inside the houses directly affects residents since all houses are built closely together and since the roofing is aluminum. Those mostly affected people by the heat problem are small children (infants) and women who stay in their homes during the daytime. The houses are built resistant to rain. The other problems related to houses are a lack of sufficient space inside the houses and a lack of privacy. Because all houses are built closely together.

Toilet facilities

	Dangerous wiring system	Safe wiring system	Low capacity	Sufficient capacity
Gurubewila	4.5%	95.5%	89%	11%
Pathegama	13%	87%	90%	10%

In Gurubewila camp, 94% of households are satisfied with the number of toilets. Therefore, they do not face toilet facility problems. But in Pathagama 42% of the people are dissatisfied with the number of toilets. They only have 4 toilets for 31 families and those toilets are in bad condition. Toilets overflow is one of the main problems.

Electricity facilities

	Sufficient	Insufficient	Overflow	Doesn't overflow
Gurubewila	94%	6%	3%	97%
Pathegama	58%	42%	84%	16%

Both camps have safe wiring system but wiring system capacity is low. Therefore, in order to ensure the safety of the residents, managers do not allow electrical equipment. This problem is specially true in Gurubewilla camp where there isn't even a power outlet.

Security system

	Sufficient	Insufficient
Gurubewila	39%	61%
Pathegama	32%	68%

Both camps have bad security systems so children and women in the camps have problems during the daytime and at night. At the beginning, police and army officers were mobilized in the camps, but they have left the camps. Now alcoholics in the camps cause problems and this is becoming more and more of a problem. Therefore, good security mobilization is urgently needed in the camp.

Health

	Good	Bad
Gurubewila	82%	18%
Pathegama	84%	16%

Even after the destruction caused by the tsunami, people were able to maintain their health since efforts were made for good sanitary conditions and healthy habits. Therefore, few people faced problems related to health.

Institutional Building

Camp Pathagama already has a residential organization which is actively functioning. Gurubewila camp does not have such an organization yet, but 91% of householders would like to have a new organization in the camp. The reason for this support, is that they believe the organization can help them in the following areas:

- Improve security & create a peaceful environment in the camp;
- Take collective action for improving the lives of residents;
- To improve living conditions, ie: micro credits; and
- To uplift the social and welfare conditions in the camp.

ANNEX 4-3 The Questionnaire Format for the Tsunami Camp Management Survey

1.	**GENERAL INFORMATION**						
1.1	Name & address of the camp						
1.2	Responsible organization						
1.3	Name of the Manager						
1.4	No. of supporting staff	Formal			Informal		
1.5	Management system of the camp						
1.6	Type of work performed by management	Water		Security		Electricity	
		Medical clinics		Toilet facilities		Social & Welfare	
		Cooperation with outsiders		Transport		Other	

1.7 Monthly expenditures and types of expenditures for the camp by management

Activity	Expenditure	Source
Electricity		
Water		
Food		
Toilet cleaning material		
Supporting staff		
Other		
Total		

1.8	Involvement of residents in decision making	Yes	No
1.9	Work done with the participation of residents	Cleaning	
		Arrange medical clinics	
		Security	
		Arrange classes	
		Religious activities	
		Social welfare others	
1.10	Number of houses/families		
1.11	Total population	Male	Female

1.12 No. of children

Schooling	
1 - 5 Years	
Infants	
Total	

2.	**PRESENT SITUATION & IMPROVEMENTS NEEDED**				
2.1	Housing	Present situation	Type Tents Semi-permanent houses Partitioned buildings Other		Number
		Problems	Lack of Equipment		
			Heat		
			Getting wet		
			Other		
		Solutions			
2.2	Electricity	Present Situation	Dangerous wiring system		
			Low capacity wiring system		
			Other		
		Problems	Dangerous wiring system		
			Low capacity wiring system		
			Other		
		Solutions			
2.3	Toilets	Present Situation	Number of toilets		
			Clean or dirty		
			Is gully sucker comes often	Yes	No
			Other		
		Problems	Insufficient number of toilets		
			Careless usage		
			No separate space for night soil disposal Other		
		Solutions			
2.4	Drinking water	Present Situation	Poor quality		
			Good quality		
			Sufficient		
			Insufficient		
			Other		
		Problems	Poor quality		
			Insufficient		
			Other		
		Solutions			

2.5	Bathing water	Present Situation	Poor quality					
			Good quality					
			Sufficient					
			Insufficient					
			Other					
		Problems	Poor quality					
			Insufficient					
			Other					
		Solutions						
2.6	Education	Present Situation	Separate place for education in the camp					
			Drop outs					
			Conduct free classes					
		Problems	Insufficient space in the house					
			Insufficient materials					
			Transportation problems					
			No access to private education					
			Social problems					
			No separate study room					
		Solutions						
2.7	Garbage disposal	Present Situation	Garbage disposal	By Management				
				By Resident				
		Problems	No separate place for garbage disposal.	Yes		No		
			Lack of residents' cooperation	Yes		No		
			Problems caused by stray dogs	Yes		No		
			Insufficient number of dustbins in the camp	Yes		No		
		Solutions						
2.8	Food supply	Present Situation	Government					
			Own supply					
		Problems	Insufficient amount of food					
			Lack of nutritious foods					
			Lack of nutritious foods	Kids		Pregnant Mothers		
		Solutions						
2.9	Transport	Present Situation	Allocation of bus transportation for schoolchildren					Yes / No
		Problems	Insufficient private & public transportation					
			Have to travel a long distance to town & school					
		Solutions						

2.10	Recreational facilities	Present Situation	T. V.	Radio	Newspaper	Indoor Games	Out door
		Problems	Insufficient space				
			Insufficient equipment				
			Insufficient funds				
		Solutions					
2.11	Camp security	Present Situation	Government police				
			Camp group				
			Other				
		Problems	No enough Security				
			Lack of equipment				
			Others				
		Solutions					
2.12	Health facilities	Present Situation	Operate medical clinics			Yes-	No-
			Provide medicine			Yes-	No-
		Problems	Not enough medicine				
			Not enough clinics				
		Solutions					
2.13	Cooking facilities	Present Situation	Cookers	Gas	Kerosene	Fire wood	Other
			Cooking in separate areas			Cooking inside the house	
		Problems	Not enough space in houses			Distance to the common place	
			Insufficient equipment				
		Solutions					

3.	**ANY OTHER PROBLEMS RELATED TO CAMP MANAGEMENT**
8. Institutional Building	
8.1 Do you have a resident's organization in the camp?	
8.2 If yes, write in the activities sponsored by the organization.	
8.3 Suggestions for strengthening the organization	
8.4 If no to 8.1, do you think it is important to have an organization in the camp?	
8.5 How can the organization help to improve the present camp conditions?	

ANNEX 4-4 Results of Camp Management Survey

Project Title : Refugee camp support pilot project
Location : Nineteen refugee camps in Weligama , Matara , Devinuwara, & Dickwella Division in Matara Distict.
Beneficiaries : Refugee camps' households.
Survey duration : Between the 3rd and 11th of July 2005
Interviewees : Camp Managers from nineteen refugee camps.

Background

After the tsunami hit on the 26th of December, 2004, 9730 people in Matara district were displaced from their homes due to the complete destruction of their homes or major damage to their homes. According to information from April 2005, 3325 people are living in 21 camps in the four divisions in Matara district. Shown below is a list of displaced person's camps-2005.05.12 at 10.00am data according to District Secretary Matara.

No:	Camp Name	Families	Division
01	Hiththeiya Raja Maha Viharaya	115	Matara
02	Nupe Gemunu Vidyalaya	38	Matara
03	Matara Maha Vidyalaya Ground	80	Matara
04	Kitulewela Piriwena	59	Matara
05	Transition camp near the Solis Restaurant	30	Matara
06	Pamburana Walukaramaya	36	Matara
07	Belideniya Training Centre	10	Dickwella
08	Maliyadda Vijaya Vidyalaya	65	Dickwella
09	Walasgala Ground	04	Dickwella
10	Thalalla Hospital Samulu Buliding	16	Devinura
11	Rural Hospital Samulu Building	24	Devinura
12	Ganadara Kandegodalla	19	Devinura
13	Thalaramba Mahindaramaya	65	Weligama
14	Bandaramulla Sudarshanaramaya	13	Weligama
15	Pradesiya Sabawa Pelana	63	Weligama
16	Labeema Camp	15	Weligama
17	Sucharithodaramaya -Mirissa	07	Weligama
18	Mahanama Kubalgama	70	Weligama
19	Senanayake Ground	75	Weligama
20	Wehergalla Samurdrgiri Viharaya	08	Weligama
21	Godakanda Samurarathreera Viharaya	73	Weligama
22	Pathegama Kanishta Vidayalaya	41	Weligama

Camp name, telephone number & Camp manager name according to data collected from the survey.

No:	Camp Name	Telephone No:	Camp manager name
01	Gamunu Vedyalaya camp - Nupe Matara	041-2232902	Mr.I.H. Michal
02	Kithulewela Piriwena Camp	041-2232624	Mr.G.V.G. Ranjith
03	Hittatiya RajaMaha Veharaya Camp	-	Mr.R.P. Premanath
04	Pamburana Valukaramaya- Camp	041-2232893	Mr.J.D.K. Premanth
05	Transition camp near the Solies restaurant, Nupe Matara	041-2232901	Mr.A.G. Gamini
06	Matara MV. Welfare camp	041-2232909	Mr.T.M. Upil De Silva
07	Labema camp		Mr.Indika Liyanamana
08	Gurubewila camp	077-6972559 / 077-9071426	Mr.Saman Gamanpila
09	Pradesiyashabuwa Weligama Camp	-	Mr.Shantha
10	Godakanda Samurathira camp	-	Mr.Methsiri Alwis
11	Kandagodalla Camp Gandara	-	Ms.Priyanka Wijeweera
12	Samudragiri Vihara camp	-	Mr. Jayarathna
13	Bandaramulla Sudarshanaramaya Camp	041-2252205	Venerable Anomasara
14	Maliyadda Welfare Centre	0714175794 / 071-3076621	Mr.Lester Rupasinghe
15	Pathagama Camp	0777-183317	Mr.E.M.Madusanka
16	Thalalla Rural Hospital Camp	-	Mr.N.G.Udulawathi
17	Belideniya camp	071-3091066	Mr.Asanka Ranaweera
18	Palana camp - Pradesiyasaba camp	072-4182699	Mr.H.R. Crisantha Indrajith
19	Thalaramba Mahindaramaya -camp	-	Ms. Priyanka Padmini

Responsible Organization

All camps are co-coordinated by the District Secretary Office. Gurubewilla, Pathegama & Labema camps are managed by Loadstar company. The camp managers from these three camps were also appointed by Loadstar company. Managers communicate with government agencies on many issues such as water, garbage disposal, medical clinics & night soil disposal.

Management Structure

Management structure in government camps.

Grama Sewake related area

↓

Graduate Scheme Persons (1 to 7)

↓ ⟶ Various NGO supporting

NGO Member (Related NGO)

Management structure by Loadstar Company

Camp Manager

↓ ⟶ Various NGO supporting

Supporting safe - Salary paid by NGO

But at times the appointed person from the GA office does not appear in the camp office. For example: Kandagodalla camp.

Number of supporting staff

Formal supporting staff	Informal supporting staff
11	09

Pamburana Valukarama camp has formal and informal supporting staff.
All camps have formal & informal supporting staff.

Type of work performed by management

Type of work	Number of camps	% of type of work
Water	19	100
Security	13	68
Electricity	18	95
Medical clinics	17	89
Toilet facilities	18	95
Social & welfare	14	74
Cooperation with outsiders	18	95
Transportation	03	16

The type of work most performed by management is the supply of water. The least performed type of work is providing transportation. Only Loadstar Company camps have school buses.

Management monthly expenditures for camps and the types of expenditures

Camp managers have no idea of how to pay camp water and electricity bills. Government issues food cards for each and every person in the camp. Total value of the card is Rs.375.00 per person. Residents can buy food for Rs. 200.00 and Rs. 175.00 with the card. Camp householders also receive Rs.5,000.00 per month for each family (But this amount of money was not delivered on time and those with permanent government jobs or jobs in the private sector did not receive the 5,000 Rs.). Some of the household heads have already started working. All households manage the above-mentioned money & food cards to fulfill their needs.

Toilet cleaning material - Government and NGO supply for toilet cleaning materials.

Clean toilet	Dirty toilet
14 (74%)	05 (26%)

According to the survey, 74 percent of camp toilets are clean. We can therefore assume that they have sufficient toilet cleaning materials.

Telephone

Telephone facilities Yes	Telephone facilities No
11 (58%)	8 (42%)

58 percentages of camps have telephone facilities. Except for Gurubewila, Pathgama & Labema camps, the government pays telephone bills. Loadstar Company pays Pathegama & Labema camps telephone bills. Except for the above three camps, all camps have large telephone bills (Since all households used the telephones free of charge) some telephones have already been disconnected.

Involvement of residents in decision-making

Involvement	No involvement
15 (79%)	4 (21%)

79 percent of camp residents are involved in decision-making. Camp managers cannot make all decisions regarding camp management and therefore camp residents also participated in the decision-making process. Residents participated in cleaning, religious and security activities in the camp.

Population

Nineteen camps have 907 families. Male population in the 19 camps is 1487. Female population in the 19 camps is 1492.

Schoolchildren(5–19Years)	1-5 Years	Infants (1 -0 years)
791 (70%)	264 (23%)	80 (7%)

Female & Male population is equal (50 % & 50%) in all camps. Total children population in these camps is 1,135. 70 percent of children are 5 - 19 years old. 23 percent of children are 1 - 5 years old. 7 percent of children are 1 - 0 years old.

Housing

Type of accommodation	Number	
Tents	89	(10%)
Transitional detached house	734	(83%)
Transitional attached house	61	(7%)

Majority of camps have transitional houses. Only 10% of the residents still live in tents. They are replacing tents with transitional houses in the same camp sites and residents are shifting from tents to transitional houses.

Housing Problems

Lack of equipment	Heat Problem	Getting wet
15 (79%)	16 (84%)	6 (32%)

Heat & lack of equipment are main problems are in the camps.

Electricity

Dangerous wiring system	09	(47%)
Low capacity wiring system	12	(63%)
Don't have electricity	02	(10%)

The low capacity wiring system is the main problem in the camps. The majority of households does not have and cannot use electrical equipment. They only have one light bulb because of this low capacity wiring system.

Toilets facilities

Generally all camps have good toilet facilities. But there are some problems.

Problems in toilet facilities

Dirty	Insufficient number of toilets	Careless usage	No separate space for night soil disposal	Overflow
5 (26%)	4 (21%)	7 (37%)	6 (32%)	2 (11%)

One of the main problems is that there are no separate toilet areas for night soil disposal. The Divisional Secretary Office should handle this issue.
Careless usage is the other main problem with the camp toilets.

Drinking water facilities

Good quality	Sufficient	Insufficient
18 (95%)	16 (84%)	3 (16%)

* No information from one camp.

Generally speaking, all the camps have good drinking water facilities.

Bathing water facilities

Good quality	Bad quality	Sufficient	Insufficient
16 (84%)	2 (11%)	13 (68%)	06 (32%)

* No information from one camp regarding water quality

Generally camps have good quality and sufficient bathing water facilities. Gurubewilla & Pathegama camps have bad quality bathing water. The JICA Project Team has an idea to support both camps to equip them with a good quality bathing water system.

Education

Present situation

Separate area for education	Dropouts	Conduct free classes
14	02	15

* No information from 2 camps for separate area for education in the camps
* No information from 2 camps for conducting free classes.

Problems

Insufficient space in the house	Insufficient materials	Transportation problems	Cannot get private education	Social problems	No separate study room
17 (89%)	10 (53%)	5 (26%)	15 (79%)	8 (42%)	7 (37%)

Except for two, all of the school-aged children go to school. But the main problem is the lack of space in their semi-permanent or transitional houses. Many households do not have tables for their children to study. 37% of camps also do not have separate study rooms. 26% of camp children also face transportation problems since some camps are located far from the main road, as is the case with Pathegama camp. 79% of children face financial problems for their private education, especially those preparing for A/L & O/L examinations. NGOs conduct free classes on various subjects such as computer, sewing, flower making, and cloth painting classes.

The Camp environment, especially at night, is not suitable for the children's education. For example, some drunken people are noisy at night. 42% of camps have social problems.

Garbage disposal

By Management	By Resident
15 (79%)	5 (21%)

* Bandaramulla Sudarshanaramaya camp disposes garbage with the cooperation of management and residents.

Problems

No separate place for garbage disposal	Lack of residents' cooperation	Problems caused by stray dogs	Not enough dustbins in the camp
6 (32%)	5 (26%)	10 (53%)	9 (47%)

In general, camps have a good garbage disposal system. Management & residents participate in garbage disposal. Urban council vehicles come 2 or 3 times a week to collect all garbage from dustbins. 53% of camps have problems with stray dogs.

Food

Government issues food cards to every person in the camps. Total value of a food card is Rs.375.00 per person. Government also grants monthly Rs.5,000.00 per family. People can buy foods from the co-operative society, for a total value of 200.00 Rs.& 175Rs.in cash. Currently, some residents have already started working. All families are able to manage their basic needs using the above financial sources.

Problems

Lack of nutritious food	14 (74%)

Lack of nutritious food is one of the main problems in camps. It is especially a problem for kids and pregnant mothers. For example, in Kandagodalla Camp at Gandara, the manager is a pregnant mother. She said she does not have a nutritious diet because the government's food packages (Total amount is Rs.200) do not always include flour and does not include milk powder at all.

Recreational facilities

All camps have some kind of recreational facility.

Categories of recreational facilities are shown in the table below.

T.V.	Radio	Newspaper	Indoor games	Outdoor games
15 (83%)	8 (44%)	10 (56%)	16 (89%)	10 (56%)

No information from one camp

83% of camps have T.V. facilities and T.V. common halls. One of the main problems (especially the case with indoor and outdoor games) is that residents do not put back the game equipment they borrowed after using it. It is common problem to all camps. Some camps don't even have a person responsible for the game equipment.

Problems

Insufficient space	Insufficient equipment	Insufficient funds
12 (63%)	12 (63%)	11 (58%)

Insufficient space for outdoor games is one of the main problems in the camps. Insufficient equipment (because residents do not return it) and insufficient funds for buying equipment are other problems.

Camp security

Government police	Camp group	No security
8 (47%)	5 (26%)	6 (32%)

* Kithulewela Piriwena Camp has government & camp group security.

When the refugee camps opened, all had police or army security. But now only 8 camps have government security. For example Pamburana Valukaramaya camp has army guards, because it is a refugee camp for army officers. 26 percent of camps ensure security through group activity. Camp managers appointed persons (men) from every house for camp security. During the night, they work to protect residents on a shift basis. 32 percent of camps don't have any security activities. Camp managers believe that government security is better than camp group security because during the night, some drunk people shout & quarrel and camp managers and the camp security group are unable to control them. Government police can provide better service in keeping a peaceful environment at the camps.

Health facilities

Operate medical clinics		Provide medicine to camps	
Yes	No	Yes	No
17 (89%)	2 (11%)	13 (72%)	5 (28%)

89 percent of camps conduct medical services for camp residents. Government doctors visit each camp once a week. Six months after the tsunami, camp residents are familiar with the camp environment and now most residents go to government hospitals to be seen by a doctor and to receive medicine.

Cooking facilities

Gas	Kerosene	Firewood	Cooking in separate areas	Cooking inside the house
1 (5%)	17 (89%)	10 (53%)	5 (26%)	14 (74%)

Kerosene & firewood are the main cooking methods at the camps. Kerosene cookers were donated by NGOs. Most of the kerosene cookers are in bad condition now. This equipment can only be used for three to four months. Households face lot of problems when using kerosene and firewood. Camp residents prefer to use gas cookers. 74 percent of camps residents are cooking inside of the transitional houses. For safety reasons, camp managers prohibit cooking inside of tents. Common space is usually allocated for cooking. People bring meals to their houses but keep their cookers and equipment in the common area after cooking. After residents moved to the transitional houses (wooden building), most of them started cooking inside the houses.

Problems

Not enough space in the house	Insufficient equipment
13 (68%)	11 (58%)

Semi-permanent houses don't have any separate place for cooking (No partitions inside the houses) 58% of camps do not have sufficient cooking equipment.

Institutional Building

* No information provided by two camps.

47 percent of camps have resident organizations. 53 percent of camps do not have any resident organization, but they do make important decisions about camp management. Moreover, regarding day-to-day work, camp managers gather people and are open ears to their ideas. Resident organization activities include organizing New Year & Vesak Poya festivals and religious ceremonies, cleaning inside camps, coordinating with outside parties, and conducting private classes. 58% of camps would like to build a new organization. Camp residents think this will help to improve the present situation in various ways. For example, new organizations would facilitate to identify common problems related to camp life, create a peaceful environment, and coordinate with outside parties.

ANNEX 4-5 Activity Records

(Original Record)

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP
Title : The Awareness / Training on First Aid for for Gurubewilla camp					

Location : **Gurubewilla refugee camp in Weligama**

Date : **24th September 2005**

Beneficiaries : **37 Gurubewilla refugee camp inmates**

Participants : **Mr. Ubeysirinarayana, Berendina Manager**
Ms. Deepika, JICA project coordinator

Resources person: **An instructor and two volunteers from Sri Lanka Red Cross,Matara branch.**

- **Objective and aims**

To create awareness among the target group of emergencies in terms of health and related remedial action

- **Activity /Proceedings**

It was found out that the above line of awareness would be useful for a tsunami- affected community accommodated in a camp with minimum facilities. Most of the camp inmates do not hail from a very educated background and people with this kind of knowledge are very minimal. Most camp inmates were of the view that some lives would have been saved when the Tsunami struck had there been persons with first-aid knowledge around. In a camp premises accidents might take place and a hospital with facilities to cater to that kind of emergencies are far away. Therefore, availability of a sizable number of persons with first -aid knowledge will be very useful.

Based on the above facts and having been discussed and arranged by Ms. Deepika with the Sri Lanka Red Cross Society, the awareness/training was given to a crowd of 37 participants at the venue of the Gurubevila camp. A facilitator from the Matara branch of the Sri Lanka Red Cross Society was used for this purpose and it was conducted from 10.00 a.m. to 5.30 p.m. on the 24th of September. Berendina Manager and Ms Deepika also participated. The course contents were:

- Why First aid is important with a view to save many a life?
- What is first - aid?

The kinds of emergencies that need fist -aid such as Respiratory difficulties, Burns, Cuts, Injuries, Bleeding, Broken bones, Dislocations Electric shocks, Snake bites and insect bites, Poisoning, Drowning, Epilepsy and So may others. How to treat every emergency case coupled with practical demonstration. Introduction to mouth to mouth CPR (Cardio Pulmonary Resuscitation) practi.

The course culminated at the end of the day with distribution of certificates of participation for the participants (Two years valid basic first aid certificate).

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP
Title : The Awareness / Training on First Aid for Pathegama camp					

Location : **Pathegama refugee camp in Weligama**

Date : **21st September 2005**

Beneficiaries : **33 Pathegama refugee camp householdes**

Participants : **Ms. Deepika JICA project coordinator**

Resources person : **An instructor and two volunteers form Sri Lanka Red Cross Matara branch.**

- **Objective and aims**

To make the target group aware of emergencies in terms of health and related remedial action.

- **Activity /Proceedings**

It was found out that the above line of awareness would be useful for a tsunami- affected community accommodated in a camp with minimum facilities. Most of the camp inmates do not hail from a very educated background and people with this kind of knowledge are very minimal. Most camp inmates were of the view that some lives had been saved when the Tsunami struck had there been persons with first-aid knowledge around. In a camp premises accidents might take place and a hospital with facilities to cater to that kind of emergencies are far away. Therefore, availability of a sizable number of persons with first -aid knowledge will be very useful.

Based on the above facts and having been discussed and arranged by Ms. Deepika with the Srilanka Red Cross Society, the awareness/training was given to a crowd of 33 participants. at the venue of the camp using a facilitator from the Matara branch of the Sri Lanka Red Cross Society from 10.00 a.m. to 5.30 p.m. on the 21st September. Ms. Deepika the project coordinator in charge of the pilot project also participated. The course contents were:

- Why First aid is important with a view to save many a life?
- What is first - aid?

The kinds of emergencies that need fist -aid such as respiratory difficulties, Burns, Cuts, Injuries, Bleeding, Broken bones, Dislocations, Electric shocks, Snake bites and insect bites, Poisoning, Drowning, Epilepsy and so may others. How to treat every emergency case coupled with practical demonstration. Introduction to mouth to mouth CPR (Cardio Pulmonary Resuscitation) practice . The course culminated at the end of the day with distribution of certificates of participation for the participants (Two years valid basic first aid certificate.

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP
Title : Handing over of the gas cooker and gas cylinder to Pathegama and Gurubewilla camps					

Location : **The Gurubewilla and Pathegama camps in Weligama**

Date : **4th August 2005**

Beneficiaries : **69 families at Gurubewilla camp**

30 families at Pathegama camp

Participants : **Mr Yoshi Nakagawa, Assistant team leader**

Mrs Rajakaruna,Assistant Divisional secretary of Weligama
Mr. Pathirana,Planning Deputy Director, Matara

Mr. Bandula Abeygunawardana, Social Service Officer

Mr. Wicramasinghe, Consultant of JICA

Misses Deepika & Chamali of JICA Project Coordinating Officers

- **Objective and aims**

To support the displaced persons as they were in need of help after having lost their belongings to the Tsunami.

- **Activity / Proceedings**

It was noticed that here was a large number of displaced persons who needed kitchen equipment to cook their meals. Suitable beneficiaries were selected and most of them were refugee camp inmate.

69 gas cookers and same number of cylinders to Gurubevila at the Gurubevila camp and 30 families of Pathegama camp at pathegama camp were lended. The chief guest Mr. Nakagawa and other participating guests distributed the equipment among the camp families. On the same day, the Marketing Manager of Shell Company created awareness for the beneficiaries of the 2 camps on how to use gas cookers and cylinders observing safety measures.

Mr. Yoshi Nakagawa handing over a gas cooker to a camp, inmate

Some of the camp inmates with their gas cookers and cylinders

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP

Title: Handing over of cupboards, generators, cupboard and stationery to camp householders & camp society.

Location : **Gurubewilla and Pathegama camps in Weligama**

Date : **20th.10.2005**

Beneficiaries : **Sixty eight families of Gurubewilla camp and Thirty families of Pathegama camp**

Participants :

- **Mr. Sakamoto, the Deputy team leader of JICA office and others were**
- **Mrs. Dammika, Assistant Planning Director of Matara District Secretary Office**
- **Mr. Wickramasinghe, JICA Consultant**
- **Mr. Ubeysirinarayana, Berendina Manager**
- **Mr. Bandula, Social development Officer of Weligama DS divisional office**
- **Ms. Deepika, The Project Coordinator, JICA**
- **Mr. Manjula Mudalige of Loard Star Company (Former Gurubewilla camp manager)**

- **Objectives and aims**

To preserve the valuable items belonging to the inmate families by introducing a safe method. To strengthen the existing societies.

- **Activity/ proceedings**

There are two camp societies in 2 camps and it was found out that the families were undergoing difficulties in terms of basic facilities like safe keeping of their valuable things and clothes. The other need is to obtain some support to their societies for strengthening. Therefore, it was decided to lend cupboards to each family for keeping their valuables and to lend a generator to each society to earn some income by lending it out to functions.

Sixty Cupboards to Gurubevila camp and 30 to Pathegama were lended. In addition to this, one generator to each camp was handed over on the same day. These generators will be used by the two camps as income sources to their societies and will be generated through lending the generators to the functions in and around Weligama area.

Handing over of the generator To Gurubewilla camp society by Mr. Sakamoto, deputy team leader

A clothing cupboard is being handed over to one of the camp inmates

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP

Title : Formation of societies at Gurubewilla and Pathegama camp in Weligama DS division

Location : **Gurubewilla and Pathegama camp in Weligama DS**

Date : **At Gurubewilla camp on 01.07.2005 at Pathegama camp on 05.04.2005**

Beneficiaries : **Families of Gurubewilla and Pathegama camps**

Participants : **JICA deputy team larder and JICA officers**

- **Objective and aims**

To strength and unite Tsunami affected families under a Society.

- **Activity / Proccedings**

A large number of families affected by Tsunami have to be given asistance since they have been provided temporary houses in make shift refugee camps selected at locations, Pathegama and Gurubewilla in Weligama DS division. Those two camps were selected by JICA study team to give assistance.

It was evident at that time that having been weakened in terms of economy and mentality they were in need of being formed into well organized societies. This need has been mentioned under the Tsunami recovery, Rehabilitation and Development project for Tsunami Affected Area of Southern region.

Having been given prior notice to the families of two respective camps, Pathegama and Gurubewilla in Weligama division, they were gathered and explained the importance of forming society in order to strengthen them to meet their requirements. There after, through an election process, office bearers like President , Sectary , Treasurer and working committees were elected.

Office bearers for Pathegama appointed on 05.04.2005

Chairman : Mr. P.M. Chandra Kumara
Vice Chairman : Mr. Chamara Punchihewa
Secretary : Mr. M.T. Priyantha Jayawardena
Vice Secretary : Ms. S.H. Kamani
Treasurer : Ms. D.A. Nalani
Advisor : Mr. Mahesh Madusanka

Working committee:

Mr. D.W. Dayarathna
Mr. W.J.A.P. Nishantha Jayalath
Ms. M.M. Shanthi Priyadarishani
Mr. Hemachandra Daluwattha
Mr. S.H. Asoke
Mr.B.M.P. Prasantha
Mr. W.J.A.P. Kamal Shantha.

Office bearers for Gurubewilla appointed on 01.07.2005

Chairman : Ms. D. Chandralatha
Secretary : H.A.S. Jayawardena
Treasurer : Ms. Karunawathi

Working committee:

Ms. G.G. Gunawathi
Ms. H.W. Dayawathi
Ms. B.K. Silawathi
Ms.M.P.M. Gihani

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP		Small Industry PP		Fishery Corporation PP

Title : Positive thinking work shop at Gurubewilla and Pathegama camp

Location : **Gurubewilla and Pathegama camps in Weligama**

Date : **Pathegama camp on 03.10.2005 (At 5pm to 8pm)**

Gurubewilla camp on 04.10.2005 (At 5 pm to 8pm)

Beneficiaries : **At Pathegama camp 57**

At Gurubewilla camp 57

Resource Person : **A.M.U. Bandara**

- **Objective/aims**

To convert the negative mind set of the camp people and make their mental faculties stronger.

- **Activity / Proceedings**

Inmates of both camps were badly affected by Tsunami and having lost heir kith and kin not to mention damages to their life time savings washed away. Now, they are in a negative mind and think they will never recover from the bad effects and and the life will not be the same again.

A resources person was earmarked by the JICA office and it was a well known trainer Mr. Bandara of Business development Centre of Matara branch. It was a 3 hour workshop. Most of the participants were women.

Contents of the workshop were:

- Disasters are part and parcel of the nature;
- You are compelled to face disasters during your life tome and it is natural;
- In the life of people like Japanese, disaster is a very common phenomenon;
- Life has to be rebuilt even after calamities natural and manmade;
- The life has to go on because we have our commitment and responsibilities to the next generation;
- It is always good to think positively since it will bring about positive results; and
- The mind should be free from hatred, jealousy and anger and other harmful feelings to produce positive results.

Participated from the office were Berendina Manager, Mr. ubeysirinarayana and the project Coordinator Ms. Deepika.

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP

Title : Positive thinking work shop at Epitamulla (FCS)

Location : **Epitamulla camps in Kamburugamuwa**

Date : **05.10.2005**

Beneficiaries : **46**

Resource Person : **A.M.U. Bandara**

Participants : **Berendina Manager and Ms. Chamaile Jayalath JICA project coordinator**

Background:

Both of camp people badly affected by Tsunami and their all proprieties wash by Tsunami. Now they were in negative mind and camp people think they are now in bad step and they cannot recover, and back to their normal life.

Objective :

Camp people negative mind convert to positive mind.

Activity:

JICA study team find the resources person and fixed the date and Time most of people can participate. Resources person conducted 3 Hrs workshop. Most of participate were women.

Mr. Bandara the resources person conducting positive thing workshop

Participants at the positive thinking workshop

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP

Title : Camp Study Tour

Location : **Matara Tsunami refugee camp**

Date : **30.07.2005**

Beneficiaries : **Pathegama Tsunami refugee camp society members and Working committee.**

Participants : **Pathegama camp society members , working committee and JICA coordinator Deepika**

Background :

There are 22 refugee camps in Matara district alone, accommodating More than 3000 persons. The government , donors ,NGOs and Refugee themselves are creating various activities that camp people Can benefit from. Some activities have generated great result and Other even negative ones. However , information concerning these activities and their benefits are seldom exchanged, especially among residents.

Objective :

The objective of the study tour is exchange information on how to Survive these difficult days and how the camp association can Improve living conditions. Upon the request of camp society.

Activity :

The Pathegama camp society selected the visiting camps and fixed The date. After that inform the relevant camp managers. This team Visited three camps in Matara district. There were Samuthdrathira Vihara camp, Valukarama camp and Matara Mahavithyalaya camp.When this group visited Samuthdrathira Vihara refugee camp and They observed that many resident were engaged in small self employed. Businesses with the assistant of the NGO. Study tour participants were So impressed that they wanted to do the same as soon as possible. People in Samuthdrathira camp even offered the tour participants To start a same kind of business.

Self employee activates identify at Samuthdrathira Vihara Camp

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
X	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP
Title : News Letter Publishing					

Location : **Matara District**

Date : **August 2005 to February 2006**

Two issue of month of August 2005 (4 pages)

One issue of month of September 2005 to month of February 2006 (8 pages) 1500 news letter copies for one issue.

Beneficiaries : **Tsunami affected people in Matara District**

Background:

After the Tsunami hit, there were many activities conducted by Government agencies, official development assistance (ODA) Agencies and NGOs to help refugees. These donors handle many Refugee camps and have considerable information on what is going on and where. On the other hand, refugee or recipients of assistance Have little information. If it is important to empower them to rebuild Their own life in camps.

Objective:

The main objective of the news letter is to setup a system for the news Letter is to setup a system for the refugees and Tsunami affected People to learn good practices on how to improve their life (back to experience And idea about natural disaster and provide best example for Tsunami well manage people. News paper is in simple sinhala and cover wide Range of readers.

Activity:

News paper published company selected and sign the contract. Monthly meeting conduct the every month before issue of news Letter. Guide and coordinate the news letter reporter , photographer And news paper publish company. The news letter distribute of target Group.

First issue of News letter (Four pages)

The first news letter was issue on August 10th 2005 and contains the following:

- The JICA assiatant to Matara;
- A message from the JICA study team;
- Introduction to three pilot projects;
- Photo and report of gas cookers lended to Pathegama and Gurubewilla camps in Weligama Division; and
- Lessons learned from the Kobe earthquake disaster –News article from Japan side.

Second issue of News letter (Four pages)

The second news letter was issue on August 30th 2005 and contains the following:

- Reconstruction of the Noonawella fish auction hall with photos;
- Lending of equipment for small industries with photos;
- First aid training held at Pathegama refugee camp;
- Good practices of the Noonawella fishery society;
- Article of Brendina Development Services (A local NGO implementing pilot project);
- Article of best examples of people from the food industry; and
- Article of KOBE earthquake - News article from Japan side.

Third issue of News letter (Eight pages)

The second news letter was issue on September 30th 2005 and contains the following:

- Foundation laying ceremony at Epitamulla FCS;
- Article of houses from Red Cross;
- Article of assistant to school from SDC;
- Message from JICA study team leader;
- Article of IDB;
- Article for Tsunami affected school (Mahamaya Balika Vidyalya Kotuwegoda Matara);
- Article of self employee at Epitamulla Tsunami refugee camp;
- Tsunami affected children creation page;
- Need identification work shop from JICA study team; and
- CODE activities in around the world. - News article from Japan side.

Fourth issue of News letter (Eight pages)

The second news letter was issue on September 30th 2005 and contains the following:

- Article of cloth cupboard and generator handing over ceremony at Pathegama and Gurubewilla Tsunami refugee camps with photos;
- Article of food exhibition;
- Article of banks who provide loans for Tsunami affected people;
- Article of self employee activities at Matara Maha Vidyala ground Tsunami refugee camp;
- Article of Tsunami affected school (St'Mary's Convent Matara); and
- Article of first aid training at Gurubewilla camp.

ANNEX 4-6 Minutes of the Steering Committee Meetings of the Refugee Camp Support Pilot Project

(Original Record)

1st Steering committee meeting for refugee camp management

05.07.2005 at JICA office Matara.

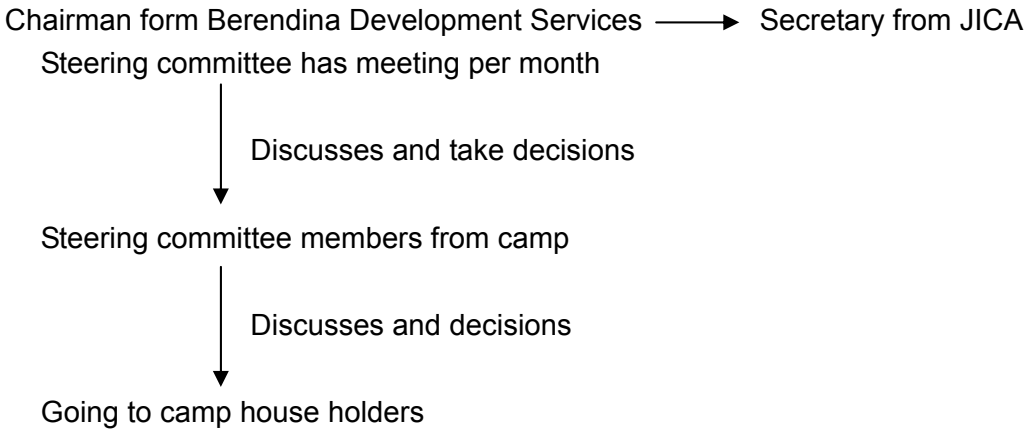
1) Committee meeting persons:

- From JICA
  - i. Sakamoto
  - ii. Wickremasinghe
  - iii. Deepika
- From Berendina Development Services
  - i. Mr. Jayath
- From Refugee camp management
  - i. Pathegama camp manager
  - ii. Pathegama welfare society - Secretary
  - iii. Pathegama welfare society - Treasurer
  - iv. Gurubewilla welfare society - Chairman
  - v. Gurubewilla welfare society - Secretary
- From GA Office
  - i. Hemantha Development officer - Matara

2) Agenda

- Welcome speech - Wickremasinghe Introduction about JICA, Tsunami rehabilitation works & streering committee.
- Mr. Sakamoto - Briefly explain what type of Tsunami rehabilitation work going to JICA. For example they are going to publish news letter for good practice in refugee camp. Wickremasinghe and Jagath all so explain about news letter and forward the example news letter.
- Pathegama camp manager told they have problem about transport. After again explain about news letter , What kind of support JICA going to provide the refugee camps and JICA has budget for seminars and training for camps.
- Regarding Pathegama camp - Speech from manager and members. Pathegama camp located far from main road. One of their main problem is traveling Students, and working person want to traveling large distant to their schools and working places. Government or private bus is only way for their transport. Some of holiday bus is did not work. Some days it did not traveling on time. Students face financial problems for get their private education (Especially A/L and O/L students) JICA cannot provide for scholarship for children, But JICA can pay salary and traveling allowance for teacher.

- Gurubewilla camp security, They has not government police or army security, camp group provide security. Some families do not have young person for security purpose. They want to pay Rs. 100.00 per night for their shift.
- JICA announce they already identified priority needs Gurubewilla and Pathegama according to survey.
- Pathegama and Gurubewiilla persons don't have idea about who is pay electricity bill in both camps. Development officer from AGA office (Mr. Hemantha) promise to he check with tap office in AGA office.
- Again discussion about responsibilities for steering committee.
- Pathegama camp has sanitation problem. Oxfam is main NGO for sanitation. Development officer for AGA office (Mr. Hemantha) going to discuss with Oxfam above matter.Gurubewilla Camp don't has any problem for sanitation.
- Steering committee responsibilities and structure.



- JICA cannot individual support for house holders. If JICA going to distribute some house hold item all item ownership belongs to society.
- Mr. Wicremasinghe explained the situation about food sector and ornamental fish. JICA final goal is strength the camp society. Committee members from camp , main responsibilities are:
  - Participated steering committee meeting;
  - Try to solve problems for camp community;
  - Connected with outside parties (Government and NGO);
  - Identify the needs for camp community; and
  - Provide information for JICA.
- Discuss possibility for maximize use the budget.
- Mr. Jayath explains about Berendina Development Service.
- Announce next meeting date 08.08.2005 at 10.00 a.m.

2nd Steering committee meeting for refugee camp management

08.08.2005 at JICA - Office Matara

1) Committee meeting persons

1. From JICA
    i. Mr. Yosi Acting team leader
    ii. Deepika
2. From Berendina development service - Absent
3. From refugee camp
    i. Pathegama welfare society - Chairman
    ii. Pathegama welfare society - Secretary
    iii. Pathegama welfare society - Treasurer
    iv. Gurubewila welfare society - Chairman
    v. Gurubewila welfare society - Secretary
    vi. Gurubewila welfare society - Treasurer
4. From GA office
    i. Mr. Hemantha - Development officer - Absent

2) Agenda

- Welcome speech from Deepika.
- Review for camp house holder's feedback after lending gas cooker and gas cylinders. Both camps respond are very high and all people are very happy. Deepika ask for document of take all signatures and serial numbers of each gas cookers. Pathegama people all forward their document and Gurubewila people promised forward their document day after tomorrow because they forgot bring the document. Deepika distribute guarantee cards for (with distributor seal) Pathegama and Gurubewila camps. Gas cylinder deposits all so distribute. Welfare society members also promised they will take care about all gas cooker and gas cylinder.
- Discussed the situation of the society. Discussed how to opening the bank account for the society. Decided to collecting members fee from all society members after that opening the bank account. But government was cancelled register the society and society wants open the joint account. Decided to society wants to make banner, rubber seal and letter head for society.
- Discussed will be held computer, safety and first aid training programme. Al so will be held disaster management training programme with CODE and children Programme.
- Discussed Gurubewila society wants be more activate. Because may be Loster company withdraw camp manager Gurubewila householders lost their control and management.
- Announce next steering committee meeting date. On 12.09.2005 at 10.00 a.m.

3rd Steering committee meeting for refugee camp management

12.09.2005 at JICA Office Matara

1) Committee meeting persons

1. From JICA
   i. A.H. Deepika Kumai

2. From Berendina Development Services
   i. Ubesiri Narayana

3. From Refugee camp management
   i. Pathegama society - Chairman
   ii. Pathegama society - Vice Chairman
   iii. Pathegama society - Secretary
   iii. Pathegama society - Treasurer
   iv. Gurubewilla society - Chairman
   v. Gurubewilla society - Secretary
   vi. Gurubewilla society - Treasurer

2) Agenda

- Discuss the situation of the Gurubewilla camp after leaving of previous camp manager. According Gurubewilla society officers new camp manager appointed by Lordstar company and he is taking care of the camp. The Gurubewilla society members indicated new camp manager was not in the camp all day and some of donors came and they return their was no any responsible officer for talked to donors. Steering committee discussed the this above matter and they were decided talked to camp manager and prepared letter regarding, If camp manager absents authority will be transferred to camp society officers.
- The steering committee went through the minutes of meeting books for both camps and recognized mistake and corrected. All so steering committee guide the secretaries how the recorded of minutes of meeting.
- The steering committee went though the states about opening of bank account both camps, colleted of society members fees and next general assembly both camps. Both society were opened bank accounts, But Pathegama society did not opening it society name, they opened joint venture account and money can be withdrawal chairman and treasurer. The both societies forward pass books to steering committee. The both of societies collected members fees but did not a total amount.
- Gurubewilla society decided next general assembly will be held on 19.09.2005 at Gurubewilla 2 p.m and Pathegama 5 p.m. JICA coordinator and Benandina manager will participated both camp general assembly.

4th Steering committee meeting for refugee camp management

10.10.2005 at JICA - Office Matara

1) Committee meeting persons

1. From JICA
   i. A.H. Deepika Kumai
2. From Berendina Development Services
   i. Ubesiri Narayana
3. From Refugee camp management
   i. Pathegama society - Chairman
   ii. Pathegama society - Secretary
   iii. Pathegama society - Treasurer
   v. Gurubewilla society - Chairman
   v. Gurubewilla society - Secretary
   vi. Gurubewilla society - Treasurer

2) Agenda

- Review of situation in Gurubewilla camp after removing of Lordstar management. The Gurubewilla camp came under Weligama DS. The Weligama DS told Belgium red cross society going to build permanent houses in Gurubewilla refugee camp land and Belgium Red Cross wants clear the land and refugee camp people should shift to other place. But Weligama DS did not recognized place. The Gurubewilla refugee camp people (majority) did not have the place shift. The Weligama DS did not send a permanent camp manager and day to day work management by camp society. Now all householders in Gurubewilla camp were became members of camp society.
- Review of society activities and financial situation.
  All the camp society members paid member fees and treasury put money to bank account. Pathegama camp society bank balance is around 3000/= and Gurubewilla camp society bank balance is around 10,000/=. Both camp books keeping is in good stand.
- Review of training needs for Gurubewilla and Pathegama camps.
  Both of camp house holders appreciate with positive thinking workshop and first aid training . Both of camp members asked workshop for improving mental conditions of refugee camp householders. Pathegama camp society chairman asked is possible to provide mobile phone repairing training and vehicle driving training for youth group in the Pathegama camp.
- Discuss handing over ceremony for office cupboard , generators and cupboard for householders in Pathegama and Gurubewilla camp. But steering committee did not fix the date. Steering committee preparing list of chief gusts. Before the handing over ceremony decided meet again and arrange other activities.

- Finally decided Pathegama and Gurubewilla camps householders did not want bating water syste.
- Steering committee decided both of camps society wants two banners. (One is society activities and other one is use for funeral houses)
- The Franch NGO (Telecoms Sans Frontieres) going to conduct computer training for Pathegama camp house holders. The computer training will be started 3rd of November 2005 and time table, transport all ready arranged.
- JICA coordinator announced next steering committee date. It will be held on 14.11.2005 .

ANNEX 4-7 Records of Evaluation Workshop on Refugee Camp Pilot Project

(Original Record)

(1) Pathegama Refugee Camp

Venue: Meeting hall of the camp
Date: 10.12.2005 at 9 a.m.

Session 1 Assistance Offered to the Community (except JICA pilot project)

What were the assistances offered to your camp?

	Supporter	Contents of Assistance
1	Divisional secretary & Grama Niladari	• Provide Rs. 5000 per month • Housing aids Rs. 250,000 were given • Provide SAMURDIYA to the people who doesn't have SAMURDIYA • Provide school books, uniforms and stationary to the school children • Tsunami cards were given Rs. 350 • Provide temporary house • Provide rations
2	LoadStar	• Transport facilities to the school children • Mental refreshment • Management and security was given • Arrange a new year festival in the camp • Provide meals for three months • Temporary houses and tents • Sweet meets and new clothes, books were given to celebrate the New year festival • Provide toys, kerosene cookers, rations, beds, chairs and a TV • Provide medical facilities • Make arrangements to build up 14 new houses • Conduct religious activities and evoke merits to the dead people • Arrange a drawing competition to the children
3	Army	• Protection & security
4	Red Cross	• four chairs and a table were given • Protection and security • Provide dry rations • Clothes, Kitchen Utensils, lamps, soap, powder, mats, Tents
5	Save the children	• Clothes, Kitchen Utensils, lamps, mosquito nets, slippers
6	French NGO	• Conduct computer classes

Session 2 Assistance of JICA Pilot Project

What were the assistances offered by JICA pilot project?

1	Concerning Social Capital	• Formulate the camp society. • Provide the necessary sergeants go forward. • All the activates finally evaluate • Provide necessary guide line and supply necessary material for sergeants the society • Improving capacity of group work • Provide necessary assistant for society. • Provide guide for how to planning and control the camp society activates.
2	Concerning Human Capital	• Assistant the English and computer education for camp children • Conduct first aid training workshop. • Conduct positive thinking workshop. • Improving the ability of dancing and singing for camp children. • Gathering good and related information from JICA newsletter. • Improving children mental strength. (Because Pathgama camp having any kind of special event camp children display Dancing and singing ability and JICA news letter reported and put photos of children)
3	Concerning Financial Capital	• Promise provide financial assistant for camp society. • Guide the camp society for loan program.
4	Concerning Physical Capital	• Lend gas cooker and gas cylinder. • Lend cloth cupboard. • Lend generator • Lend office cupboard, Stationery and white board for camp society. • Lend recharge torch for camp society for camp security purpose.

Session 3 Effects of Pilot Project on Five Capacities

How do you evaluate the capacities and assets before and after pilot project?

3-1 Institutional Capacities

	Evaluation Item	Score	Comments
1	Understanding community need	1	Significant improvement. Because they are from same area. Before Tsunami they know each other and now they understating each other need very well.
2	Fairness of Management	1	Significant improvements. Society officers continue their communication link with other members very well and they can understand society members opinions.
3	Trust among members	1	Significant improvements. Because before Tsunami they were in one community. They know each other very well.
4	Internal communication	2	Some improvement. Before Tsunami they have good communication link. After camp society formulate there is some improvement
5	Involvement of members	1	Significant improvement. All the society members very activate and involvement society activities.

	Evaluation Item	Score	Comments
6	Information access	2	Some improvement. There is some barriers for information access To society. It is special for government institute.
7	External negotiation	1	Significant improvement. According society officers now they are well organizing and they can negotiate with government officers and Loardstar company. For example: In October Loardstar company decided to withdraw their management from the Pathegama camp. Then camp society wrote a letter to (in society letter head) Loardstar company and requested a meeting with the top management. After Loardstar company agree and society asked to continue the management at least for a couple of months more. After discussion the company executives agree to continue the their management.
8	Cooperate with other camps	2	Some improvement. They have relationship only Gurubewilla camp.
9	Contribution the outsiders.	1	Significant improvement Camp society organized new year festival, alms giving ceremony and cleaning common well in the village. (Provide free labor for cleaning well and cleaning village temple.)
10	Contribution the camp life	1	Significant improvement. Every person in the camp contributes the camp life various way. For example general cleaning, and other group activities.
11	How long society need	-	They are going to continue their society activities as long as possible even after shifting to permanent houses. Now they have enough capacity and knowledge to continue the society. Micro credit can be a tool for this.

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Computer and English training for children and adults.	1	Teachers and students have very good communication link.
2	First aid training and handing over certificate. It is valid for two years.	1	Now they have good knowledge for first aid training and before Tsunami if they have knowledge they can save other life also.
3	Positive thinking workshop	1	All camp people think they were very bad situation and they cannot back to their normal life. Now their mind were change and they thinking they can recover.
4	JICA newsletter.	1	Sharing knowledge and gathering knowledge It is supply good example for how to manage this kind of natural disaster.

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Provide necessary guide line for society quick loan system	1	
2	Berendina (local NGO) going to provide financial support for camp society.		They are disappointed. Because they are waiting long time to this micro credit program.

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Lend gas cooker and gas cylinder.	1	They were face difficulties for using kerosene Cooker. For example cookers were broken, Bad simile in food, lack of safety and higher price of kerosene. Now they are free from all the problems.
2	Lend cloth cupboard	1	They didn't have safety place for keep the cloth and they face lot of difficulties.
3	Lend generator	1	The society supposes to rent it outsiders and generator the income for camp society.
4	Lend office cupboard, stationery and white board for camp society.	1	
5	Lend recharge torches	1	Pathegama camp has security problems. They did not have any light for back side of the camp, camp society request re charge torches and now camp was free of this problem.

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"? Comments from the beneficiaries are as follows:

- Institutional building of the refugees is important;
- JICA came to the camp repeatedly;
- JICA treated us as equal partner;
- Pilot project gave our children chances to demonstrate their ability of dancing;
- Co-assistance is very good we improved mutual understanding in the camp;
- JICA understands the needs of community;
- Some other NGOs and donors did not have good approach. They came with some goods and distribute to the people and never came back. They do not even discuss with us what ware our needs; and
- Other supporters did not try to get any feedback from us, but JICA did All the participants agreed that co-assistance approach was an appropriate one for them.

Session 5 Quantitative Indicators

What are the quantitative Indicators that illustrate your community?

	Indicator	Data
1	Number of working committee meeting	16
2	Number of general meeting	8
3	Participated rate of general meeting and working committee meeting	80%
4	Amount of saving	Rs.6613.94
5	Number of loan issues	10
6	Recovery rate	100 %
7	Gender distribute of loans	Male 2 Female 8
8	Purpose of loan	For Medical treatment, repairing three wheelers, Extra classes fees and foods

List of Participants from beneficiary side

No:	Name
1	Mr. B.H. Chanaka
2	Mr. D. Hemachandra
3	Mr. Ajith Priyantha
4	Mr. T.P. Piyasena
5	Mr. Chamara Punchihewa
6	Ms. S.H. Lalani
7	Ms. M.M. Shanthi Priyadarsani
8	Mr. L.C.R. Hewamana
9	Ms. A.W.M. Ramya
10	Ms. S.H. Kamani
11	Ms. D.A. Nalani
12	Ms. M.S. Wikaramasuriya
13	Ms. Chandrika Jayaweera
14	Ms. K.U. Dalsi Priyanithi
15	Mr. P.M. Chandra Kumara
16	Mr. W.J.L.P. Kama Shantha
17	Mr. G.P.H. Chandana Sudath

(2) Gurubewilla Refugee Camp

Venue: Meeting hall of the camp
Date: 18.Dec.2005 at 3 p.m.

Session 1 Assistance Offered to the Community (except JICA pilot project)

What were the assistances offered to your camp?

	Supporter	Contents of Assistance
1	Divisional secretary & Grama Niladari	• Provide Rs. 5,000 per month • Housing aids Rs. 250,000 were given • Affected people were gathered to a camp • Medical facilities were given • Provide SAMURDIYA to the people who doesn't have SAMURDIYA • Provide water to drink • Provide birth certificates, identiticards • Provide school books, uniforms and stationary to the school children • Tsunami cards were given Rs. 350 • Provide temporary house • Compensation was given to the people who died in the Tsunami • Provide electricity • Provide rations
2	LoadStar	• Fabric painting training to children • Management and security was given • Arrange a new year festival in the camp • Provide meals for three months • Temporary houses and tents • Houses were given to sub families • A computer was given and conducted classes • Training on meditation

	Supporter	Contents of Assistance
		• Sweet meets and new clothes, books were given to celebrate the New year festival • Provide toys, kerosene cookers, rations, beds, chairs and a TV • Provide medical facilities • Provide 3 scholarships to the children who loss their parents • A lord Buddha's statue was given and the Children were trained to worship lord Buddha • Arrange a trip to Kataragama
4	Red Cross	• Two chairs were given • Provide medical facilities • Fir staid training • Provide dry rations • Clothes, Kitchen Utensils, lamps, soap, powder, mats, Tents • Make the children happy
6	World Vision	• Provide music instruments for a dancing class • Motivate the children to radio programmes • Formed a children's association • Arranged a trip to Rantabe and stayed for 5 days • Provide water • Provide toys • Motivate them for competitions
7	Sarvodaya	• Dry rations • Scholarships to the children

Session 2 Assistance of JICA Pilot Project

What were the assistances offered by JICA pilot project?

1	Concerning Social Capital	• Convince the impotency of working together • Formed an association called "Yali Pibidemu" • Provide JICA News letter. By that the unity among the camp people was increased • Trained how to work as a group • Selfishness of the people was destroyed • Conducted monthly meetings • Motivate the children and the elders
2	Concerning Human Capital	• A First aid training was given and a certificate was issued • Arranged a drawing competition among children and gave awards • Arrange positive thinking workshops • Publish the children's good work in the news paper • Gave a training on how to use a gas cooker correctly
3	Concerning Financial Capital	• Trained the people for saving money • Introduce a loan scheme • Trained us to save Rs. 50
4	Concerning Physical Capital	• Lend a gas cooker • Lend a cupboard • Lend a generator

Session 3 Effects of Pilot Project on Five Capacities

How do you evaluate the capacities and assets before and after pilot project?

3-1 Institutional Capacities

	Evaluation Item	Score	Comments
1	Understanding Community needs	2	Some Improvement Poor communication among members Poor management in the working committee
2	Fairness of Management	2	Some Improvement Due to presence of 9 Grama niladari divisions the fairness is very poor
3	Trust among members	2	Some Improvement Only the secretary is active
4	Information Access	1	Significant Improvement Got the addresses of Governmental organization and non governmental organization
5	Improvement of External communication	2	Some Improvement Discussions with governmental and non governmental organizations to get homes
6	Contribution the outsiders	2	Significant Improvement Arrange a religious activity for the remembrance of one year celebration of Tsunami Disaster
7	Cooperate with other camp Societies	1	Significant Improvement Cooperation with Denuwala and Pathegema camp
8	Contribution of the society to the members	2	Some Improvement Continuing the loan scheme
9	Involvements of members	3	Not much difference Contribution of the members is very poor
10	Contribution and attendance of the Governmental Officers and institutes	2	Some Improvement Assistance is given from Weligama Divisional Secretary's Office
11	Members involvement in decision making	1	Significant Improvement Good consideration is given to the ideas of the members
12	Importance of having the society	-	Working as the society is good. Make arrangements to assist the society after the JICA Project

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Positive thinking Workshop		• Started and learned to think positively
2	Training for gas cooker utilizing		• Learned new things

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Revolving fund		• Learned to save money • Generate and extra income from the interest • When its urgent can get money

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Gas cooker & Cupboard		Modernization

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

They prefer Institutional Capacity Building approach to facilitate co-assistance among tsunami-affected people themselves. One participant mentioned providing physical resource could make them spoiled with depending mentality. Since the society themselves take leading role in camp management, every society member agreed the importance of the solidarity and appreciate JICA's approach.

Session 5 Quantitative Indicators

What are the quantitative Indicators that illustrate your community?

	Indicator	Before	After
1	Number of General meetings	-	04
2	Number of Working committee meetings	-	06
3	Number of members who obtain loans	-	08
4	Participation rate for -general meetings -working committee meetings	-	 50% 80%
5	Amount of loans issued	-	Rs. 4,000
6	Gender ratio who obtain loans	-	Male : 03 Female 05
7	Loan recovery rate	-	50%
8	Savings	-	Rs. 11,335
9	Purpose of loans	-	Self employment, Education
10	Society activities	-	01

List of Participants from beneficiary side

No:	Name
1	Ms. B.K. Seelawathi
2	Ms. R. Karunawathi
3	Ms. Sajeewa Nilmini
4	Ms. P.D.S. Kusum
5	Mr. H.A.S. Jayawardena
6	Ms. Renuka Damayathi
7	Ms. A.G. Sriyani
8	Ms. E.J.P. Maduka
9	Ms. H.A. Dinushi Chanika
10	Ms. H.A. Nayana Dilhani
11	Ms. G.G.T. Wanamali
12	Ms. K.D. Padmaseeli
13	Ms. A.G. Gunawathi
14	Mr.G.K.K. Anil Sahantha
15	Mr. J.K. Thlikasiri
16	Ms. J.K. Ramesha
17	Ms. B.K. Lilawathi
18	Ms. W.B.Aselian

ANNEX 4-8 Memorandum of Understanding for Refugee Camp Pilot Project

Recovery, Rehabilitation and Development Project
for TSUNAMI Affected Area
of Southern Region of Sri Lanka

Matara Main Office
37, New Tangalle Rd., Kotuwegoda, Matara
Telephone: 077-697-8709
e-mail: sakamoto@padeco.co.jp

Colombo Satellite Office
No.19 Hedges Court, Colombo 10
Telephone: 077-9052609
e-mail: iwami@star.odn.ne.jp

Memorandum of Understanding

The District Secretary of Matara and the JICA Project Team for Recovery, Rehabilitation and Development Project for TSUNAMI Affected Area of Southern Region of Sri Lanka has discussed and reached an agreement for the implementation of the Pilot Project for the Refugee Camp Management Support in Matara.
District Secretary and JICA Project Team will take necessary action for the execution of this pilot project.

Following document is attached,
・ Summary of the pilot project plan

Mr. Gamini JAYASEKARA
District Secretary of Matara

Mr. Yuichiro MOTOMURA
Leader JICA Project Team

Summary of the pilot project plan

Terms of Reference for the Pilot Project for Recovery, Rehabilitation and Development Project for Tsunami Affected Area of Southern Region in the Democratic Socialist Republic of Sri Lanka

1.1 Pilot Project. Refugee Camp Management Support Pilot Project

(1) Title : Refugee Camp Management Support Pilot Project

(2) Location : Weligama Division in the Matara District

(3) Counterpart Organization
: District Secretary Office and Divisional Secretary Office

(4) Beneficiaries : The Guru Babila and Pahatgama Camps are model camps[1] and all refugee camps[2] in the Matara district

(5) Project Duration : August 2005 to February 2006

(6) Background

Since the tsunami stuck on December 26th, 9,730 people in Matara were displaced from their homes due to partial or complete destruction of their houses. While relatively wealthier persons live with relatives and/or friends, others after initially staying in schools and public buildings are now in camps. As of April 2005, 3,325 people from 911 families live in 22 camps in the four divisions of Matara District.

Minimum living conditions such as shelter, water, food, and toilets are assured in the camps, however, many issues need improvement including facilities, education, health, transportation, quality of shelters and toilets, water quantity, power supply, and employment. Refugees are not organized and unable to improve these problems from their own initiatives.

[1] The Guru Babila and Pahatgama Camps are model camps to demonstrate good camp management practices. Seventy families from nine villages stay in the Guru Babila Camp in the Weligama Division of Matara. They are mainly those displaced from Guru Babala Village (26 families), Maha Vidiya (12 families), and Denuwara (15 families), respectively. There are 39 households and 29 school children in the Pahatgama Camp, also located in the Weligama Division of Matara. All families originated from a single village called Samraweera Pedesa. In both camps, people have lost everything including the houses they occupied, all their furniture, and also their livelihoods. Both camps had families that had members killed in the tsunami.

[2] This pilot project supports all 22 refugee camps in the Matara District in terms of mutual learning on how to organize them and manage their camps. Therefore, approximately 3,000 refugees may obtain some benefit from this pilot project.

(7) Goals and Objectives

Goals:

- To develop the capacity of affected people to contribute to improve their quality of life

Objectives:

- Organization of a structure for refugee camp associations to learn from each other's good practices. A newspaper will be issued for this purpose;
- Development of a strong society of affected persons capable of lobbying for their rights and assistance and able to contribute to improve their lives; and
- Improvement of basic household needs, water, sanitation, as well as environmental aspects at temporary housing sites, working in partnership with affected people.

(8) Project Tasks and Expenses for procurement

There are five tasks to be undertaken by the contractor. Through the project period, the contractor needs to procure listed items under the name of JICA project team in the attached sheet. The bidders are required to include the expenses to their cost proposals.

Table1 Tasks for Sub Project C: the Refugee Camp Management Pilot Project

No.	Tasks	Detail
C-1	Establishment of refugee camp associations	The contractor assist the refugees to facilitate the formulation of refugee camp associations, especially in the two model camps
C-2	Adoption of good camp management practices	The contractor should support the refugee camp association to implement good practices for co-assistance among refugees in camps
C-3	Issuance of a newsletter	A bi-weekly newsletter will be issued to disseminate good practices within refugee camps under the support of the contractor
C-4	Mutual learning of good practices	The contractor support and provide opportunities to learn each activities through visiting each refugee camp association, meetings, and seminars.
C-5	Awarding of good practices	Good practices will be awarded for effective extension and adoption under the support of the contractor

(9) Implementing Schedule

Implementing schedule can be expected as follows.

Table2 Implementing Schedule for Sub Project C

No.	Task	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
C-1	Establishment of refugee camp associations		■						
C-2	Adoption of good camp management practices		■■■						

No.	Task	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb
C-3	Issuance of a newsletter		■	■	■	■	■	■	
C-4	Mutual learning of good practices		■	■	■	■	■	■	■
C-5	Awarding of good practices						■		
	Reporting						△		△

(10)Implementing Structure

Each camp in the Matara District will formulate a Camp Refugees Association for co-assistance. The JICA Project Team, together with the District Secretary Office, will support the activities of Refugees Associations. Implementation work will be contracted out to a local NGO, while important decisions for this pilot project will be made by the Steering Committee, where each representative from the JICA Project Team, the District Secretary Office, the local NGO, as well as the Refugees Association meet.

(11)Issue to be considered for Implementation

Following issues should be considered for implementation by the contractor during the implementation phases.

Table3 Issue to be considered for Sub Project C

Sustainability and Expandability	This pilot project aims to empower the refugees through assistance to their associations in each camp. A social mechanism and experience of co-assistance from this pilot project will endure, with refugees finally able to organize themselves for other difficult times. Once the camp association becomes active, they will be able to lobby their wishes and participate in planning activities for permanent housing. Concerning its expandability, this pilot project will directly facilitate the adoption and dissemination of good camp management practices. Once camp associations realize that leaning from other camps is effective to improve their own camps, mutual learning will be accelerated. Additionally, it is expected that Matara District will transfer the experience and knowledge accumulated in this pilot project to other camps not only in the district concerned but other regions in Sri Lanka as a model case.
Relationship to Other Japanese Assistance	A number of other donors including UN agencies, such as UNICEF, and NGOs, such as CHF, Save the Children, CCF, Oxfam, and Sewa Lanka, are also working on some aspects of camp welfare and livelihood work. UNICEF has built toilets, although some of them need quality improvement. CCF works with children to form children and youth clubs in some camps. Oxfam and Save the Children work on some livelihood works, as do many other donors. The approach so far has been to provide machinery. The JICA Project Team will coordinate its work with other agencies by attending weekly donor/NGO coordination meetings held at the offices of the District Secretary and Divisional Secretary to avoid duplication of work as sub-sectors and camps are divided among agencies.

ANNEX 5-1 Detail of Credit and Savings Scheme in the Three FCS

Dodampahala south Gramasewa division Belikatuweella FCS Ltd.

Year Established : 1993

Number of members in the society from 1993 to 2003

Year	1993	2000	2003
Number of Members	93	100	102

Basic requirement to be a member: Resident in Gramasewaka Division

Type of credit	Ceiling Amount (Rs.)	Interest rate	Loan repayment period	Penalty for default periods
Membership loar	2,000-50,000	18% /year	10-25 mos.	none

Requirements

1. Two guarantors from the society, who are not debtors.
2.Should have 25% of savings in the applicant's savings account.

Interest rates

General savings : 12 % per year

Essential savings : 12 % per year

Children's savings: 24 % per year

Kamburugamuwa Epitamulla FCS Ltd.

Year Established: 1996

Number of members in the society from 1996 to 2003

Year	1996	2000	2003
Number of Members	103	107	71

Basic requirements to be a member of Gramasewaka Division

Requirements to obtain credit

Type of credit	Ceiling Amount (Rs.)	Interest rate	Loan repayment period	Penalty for default periods
Urgent loan	500-2000	15% /year	3 mos.	none
General loans	2,000-50,000	18% /year	4 to 10 mos.	none

Requirements
1. Two guarantors from the society, who are not debtors.
2. Should have 20% of savings in the applicant's savings account.

Interest rates
Outside savings : 10 % per year
Children's savings: 10 % per year

Gandara West Noonawella FCS Ltd.

Year Established: 1989
Number of members in the society from 1990 to 2003

Year	1990	1995	2000	2003
Number of Members	40	128	128	158

Basic requirement to be a member: Resident in Gandara West Gramasevaka Division

Requirements to obtain credit

Type of credit	Ceiling Amount (Rs.)	Interest rate	Loan repayment period	Penalty for default periods
Urgent loan	1,000	3% /mos.	1 mos.	25 Rs./day
Membership loans	5,000-60,000	16% /year	3 to 36 mos.	none
Urgent disaster loans	5,000 or 10,000	3% /mos.	1 mos.	25 Rs./day
Essential loans	500% of the personal	16% /year	5 years	none

Requirements
1. Two guarantors from the society, who are not debtors.
2. Should have 25% of savings in the applicant's savings account.

Interest rates
General savings : 12 % per year
Essential savings : 12 % per year
Children's savings: 24 % per year

ANNEX 5-2 Survey Sheet for Fishery Cooperative Society (FCS)

1) Name of FCS: _____
2) Year of creation: _____
3) Registration number: _____
4) Number of active members: _____ (men: _____ / women: _____)
5) Condition to be a member: _____

6) Monetary contribution to be a member:
- ☐ Membership charge (at the entry) _____Rs.
- ☐ Regular charge _____Rs. (Per month or year)
- ☐ Other charges _____Rs. For _____

7) Management of money:
- ☐ At bank, Name of bank: _____
- ☐ In the hand s of a responsible person
- ☐ Other, please specify,

8) Money deposit: Rs. at this moment

9) Background or motif of creation:
- ☐ Fishermen were willing to cooperate with each other to improve their living conditions.
- ☐ Government recommended that FCS be created.
- ☐ Fishermen thought of creating FCS to receive aide from donors and NGOs.
- ☐ Other, please specify,

10) Purpose of creating FCS:
- ☐ Improvement of living conditions of fishermen
- ☐ Strengthening of the friendship among fishermen
- ☐ Acceptance of aide
- ☐ Other, please specify, _____

(Multiple answers is possible)

11) Number of fishing boats:
Multi-day boat: _____ , at which harbor: _____
One-day boat: _____
FRP outboard: _____
ORU traditional:
ORU mechanized:

12) Current activities of FCS:
- ☐ Financing money to its members
- ☐ Common marketing (buying and selling) of fish for members
- ☐ Common purchase of fishing boats and gear for its members
- ☐ Common fishing
- ☐ Providing insurance or scholarships
- ☐ Sales of commodities

- ☐ Sales of fuel, ice, water etc. for fishing operation
- ☐ Training and education
- ☐ Operation of facilities (ex. Auction hall, engine lockers, toilets, etc.)
- ☐ Social activities (ex. Road and village cleaning, etc.)
- ☐ Other, please specify, _____

(Multiple answers is possible)

13) Detail scheme of said activity:

14) Problems of FCS:

- ☐ Lack of spirit of collaboration or cooperation among its members
- ☐ Lack of funds
- ☐ Lack of necessary equipment
- ☐ Lack of members
- ☐ Interference of the government
- ☐ Heavy tax system
- ☐ Other, please specify, _____

(Multiple answers is possible)

15) Specific problem of FCS due to the tsunami disaster:

- ☐ Members are discouraged
- ☐ Loss of common equipment
- ☐ Loss of common facilities
- ☐ Other, please specify, _____

(Multiple answers is possible)

16) Future prospect of activities:

- ☐ Financing money to its members
- ☐ Common marketing (buying and selling) of fish for its members
- ☐ Common purchase of fishing boats and gears for its members
- ☐ Common fishing
- ☐ Providing insurance or scholarship
- ☐ Sales of commodities
- ☐ Sales of fuel, ice, water etc for fishing operation
- ☐ Training and education
- ☐ Operation of facilities (ex. Auction hall, engine lockers, toilets, etc.)
- ☐ Social activities (ex. Road and village cleaning, etc.)
- ☐ Other, please specify, _____

(Multiple answers is possible)

End of questions. Thank you for your cooperation.

ANNEX 5-3 Results of Questionnaire Survey for 9 FCSs in Matara District

Registration No.	Name of the Society	Year of Establishment	No. of active members
Summary from the Survey			
Sp-1	One-day and Multi-day Boat Owners Association	1993	247
This society is consists of on one-day boat and multi-day boat owners who live in Matara districts. Members of this society are disbanded along the coast of Matara district. This society was established as an owners association rather than as an FCS. There are 247 active members at the time of the survey. The main activity of this society is focused on business loans to its members. Members are eligible to borrow funds under certain conditions (the surety of two members, repayment records, an investment). This society, in the future, is planning to operate the following: (1) ICE plant; (2) Dried-fish factory; (3) Fishing gear shop; and (4) Boat repair shop.			
MR-12	Kamburugamuwa South GS Division Epitamulla FCS	1997	71
This area was badly affected by the tsunami. Seventy-six households were forced to move out from their houses into temporary camps near the village. Almost thirty percent of its members were working in coastal fisheries and other members were working in the coir and clothing industries, in agriculture, etc. Membership fees were collected by the FCS and deposited at the Sanwa Rural village bank. However, the tsunami has destroyed FCS office facilities and washed away all notes and account books. At the time of the survey, all of the FCS activities, except for pre-schooling, terminated. The pre-school (35 - 40 children are learning) is now located in the Buddhist temple near the camp. Maximum amount of loans offered from the FCS to its members is 5,000 Rs. for a 10 months period with an interest rate of 18%.			
MR-740	Lunukalapuwa FCS	1990	190
191 members are registered in this FCS. Among them, only fifty members are actively working in the fishery sector and coir industry. Membership fees (120 Rs. which includes 20 Rs. as a handling fee) were collected to become a FCS member. Collected funds are estimated to be a total of 31,000Rs., which were deposited at the local bank. The reason for establishing the FCS is to provide a loaning system for deprived fishermen. One multi-day boat, six FRP boats and twenty ORU were owned by the FCS members but the tsunami destroyed almost all of the boats. Some of the Oru have been repaired by an NGO. Current FCS activities are mainly focused on loaning to businesses. Loans have been provided to members to be repaid within a 12 month period and a maximum of 5,000 Rs. will be loaned (14% interest)			
MR-775	Dodampahala Central FCS	1990	126
126 members are registered in this FCS. Only 40% of its members are active. Before the tsunami stroke, the majority of women were working in a garment factory near the shore. This FCS's members own eight multi-day boats, two FRP boats and three ORUs with an engine. Current FCS activities are focused on loaning businesses, but one of its members borrowed 300,000 Rs. using the FCS name. In April of 2004, this loan became an irrecoverable loan, which caused trouble with a local bank, leading to the termination of the loan.			
MR-Dik04	Dodampahala South & Belikatuwella FCS	1993	102
There are 102 members registered in this FCS. Among its members, 74 are active members including 4 women. Current FCS activities are focused on loaning businesses, cleaning fishing facilities and social welfare services. Social welfare includes weddings and funerals, during which food and drink are provided by the FCS. 18 multi-day boats, 3 one-day boats, 5 FRP out-boards and 60 ORUs are owned by members of this FCS. The office facility where an opening ceremony in November 2004 for granting loans to businesses was destroyed by the tsunami. After the tsunami hit the area, a safe and accounting books are kept in the residence of the treasury of this FCS for security reasons. The auction hall and meeting			

Registration No.	Name of the Society	Year of Establishment	No. of active members
houses were also damaged by the tsunami. Nevertheless, conditions are not as critical as the office facility. According to board members of the FCS, mental damage caused by the loss of the newly constructed office facility was greater than the physical damage itself.			
MR-724	Noonnawella & Gandara West FCS	1989	158
There are 286 members registered in this FCS. 158 of its members are active, including 99 women. The distinction made between active and inactive members is based on attendance to meetings, repayment conditions, and constant savings in the FCS bank. Current FCS activities consist of loaning to businesses, (10 multi-day boats, 50 FRP out-board and 30 ORUs are owned by its members). Loans are provided to its members and must be repaid within a 36 month period for a 50,000 Rs. loan (15 - 30% interest). There are penalties for delayed repayment. Most of the fishermen use loans for the purchasing of fishing gear and repairing engines. This FCS was acknowledged as the best managed FCS in the Southern districts by the Ministry of Cooperative			
MR-dev01	Nugegoda & Devinuwara FCS	1991	148
According to the director of the board, the government of Sri Lanka encouraged the establishment of FCSs all over the island. This movement allowed for this FCS to be established. There are 148 (95 active) members registered in this FCS. There are 2 boat owners and 6 ORU owners. Other members are temporary employees to these owners. Current FCS activities include loaning to businesses. Loans provided to its members must be repaid within a 24 months period for 10,000 Rs. (18% interest). This FCS has collected capital from its members and the amount reached 637,000 Rs. in 2005. One of the attractive features of this FCS bank is its low interest rate to businesses and high rate of interest for saving accounts for its members.			
MR-705 MR-8	Mirissa South No.1 GN division FCS Mirissa South Samagi FCS	1989 1989	252 129
These two FCS are situated west of Matara and their activities are almost identical. There is only one condition to become a member of these FCSs. Members must be living in the GN division that was partitioned by the government. All male members work as fishermen, however the majority of women work in coir, garment and fishery sectors. The reason for the establishment of this FCS is to provide a loaning system for deprived fishermen so they can purchase the necessary fishing gear. Current FCS activities are mainly focused on loaning to businesses. Loans have been granted to several members and must be repaid within a 12 months period for 5,000 Rs. Another activity carried out by this FCS is a children's savings system which continued until 2002 but ended after the tsunami struck the area. This FCS experimented on the common utilization of multi-day boats which was subsidized by the government until 2003.			

ANNEX 5-4 Workshop for FCSs' Needs Assesment

Three need identification workshops conducted on 29th,30th August, and17th September, 2005, for Noolwella , Eppitimulla and Dodanpahala Fisheries Cooperative Societies .Three workshops arranged with the request of the society beneficiaries. These societies were formed under cooperative act. JICA team has decided to strengthen these societies and build up their capacity.

(1) Background

These societies have a long experience in micro finance activities among their members. But they have very limited knowledge in management, enterprise development, society development, etc. The main objective of the JICA is to support overall development of the society as well as their families. In this context need identification is very important to develop strategic plan and individual capacity building program for further activities. It was also decided to conduct workshops and identify the possible areas for income generating activities and to plan further assistance.

(2) Objective

In order to identify the entrepreneurial skills and generate project ideas among the participants, JICA team decided to conduct need identification workshops with the target group and find actual commitments of the beneficiaries. The objective of the workshops is to get the project ideas and screen those ideas according to the resources available including their capability.

(3) Area covered by the workshops

Workshops covered fallowing areas and topics:

- Brainstorming secession;
- Generating of enterprise ideas;
- Group work;
- Critical analyses of the Case studies;
- Screening of enterprises;
- SWOT analysis; and
- Identification of Training Needs.

(4) Participants of the workshop

Number of Workshop Participants

Name of FCS	Number of Society Members	Number of Participants to the Workshop
Noolwella	312	21
Eppitamulla	80	46
Dodanphala	120	61

Participants of the workshop must meet the following conditions. (1) One of the family members must be registered at the FCS, (2) participants must be 18 years or older, and (3) must be a person planning to start a new business in the community.

Most of the active members of each FCS participated the workshop. There were more female participants and its rate was around 75%. More than half of the participants are family members (usually wife or husband) of FCS members.

(5) Session One- Livelihood Activities

Participants were requested to identify the main livelihood activity and additional earning of the family. This information was listed out in the workshop. Since on of the objectives of the workshop was to encourage participants to generate additional income, discussions on this issue was conducted. Through this exercise, it was revealed the most of the participants either had tried to have second livelihood or had some income generating activities in their mind. But only few of them have appropriate ideas that would enhance their family income significantly.

Main Income and Second of Income of the Participants

Fisheries Co operative Society	Source of Income/Number of Participants	Second Source of Income/Number of Participants
Dodanphala	Fishing 51 Manufactur :of Dry Fish 3 Wage Labor 02 Coir Manuf:05	Coir 26,Manu:of Mauldiven fish 13, Lace Making 06, Grinding Mill 01,Cage farming Lobster) 01,Repairing of fishing Nets 01,Brick Making 01,Yourght Man:01,Fish sellers03, Fish sellers03,Non 05,
Eppitamulla	Fishing 14,Coir Man;10 Mushroom cultivation 05 Retail shop 04 Driving 02 Wage Labours03 Retail fish sellers 5 Others 3	Plant Nursery 02 Coir Manu:13 Sewing and garment 08,Food items 04 Retail shop 03 Non 14
Noolwella	Fishing 11 Coir 02 Manu: of Maldives fish 02 Repairing of Boat engines 01 ,Retail fish sellers 03	Sewing 07 Manu: of food items 04 Others 10

(6) Session 2 - SWOT Analysis

One of the main Objective of the workshop is to identify a suitable business as an additional family income source. Participants express ideas in their mind. In this session, some selected business ideas from participants were analyzed with SWOT methodology.

Selected enterprises were analyzed with the participants. The Strengths, Weakness, Opportunities, and Threats were discussed with the proposed business ideas. This exercise was very impressive and participants cooperate to express their advantages and disadvantages on each business. The final instruction given to the participants was to plan more carefully before they start actual business. The participants also requested to make their own SWOT before they start their business. If the results shows more Threats and Weakness, than the Strengths, the project is not practical. But on the other hand, if entrepreneur is capable to minimize the weakness, then the project can be launched with minimum risk.

(7) Session 3 - Training Needs

Identification of training needs was also conducted in the workshop .The objective was to enhance skills and knowledge before participants start their business. It is also explained that providing individual training is not possible under this project. But JICA can organize trainings for group of people. Fallowing list shows the training needs requested by the participants.

Training Needs for the New Business of the Participants

Name of the Fisheries Co Op: Society	**Identified Training Needs**
Noolwella FCS	Manufacturing of Dry Fish Manufacturing of Maldives Fish Repairing of Boat Engines. Repairing of Fishing Nets. Manufacturing of Garment items.
Eppitamulla FCS	Mushroom cultivation Manufacturing of Food Items Manufacturing of Maldives Fish Manufacturing of Dry Fish Pot flowers Repairing of fishing nets Management Training
Dodanphala FCS	Manufacturing of Dry Fish Sewing training. Ornamental Fish Breeding Repairing of Boat equipments. Repairing of fishing Nets GPS Radio Satellite Technology Community hall facility

ANNEX 5-5 Activity Reports

(Original Record)

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : tudy Tour to Noonnawella					

Location : **Gandara West , Noonnawella FCS**

Date : **19th September 2005**

Beneficiaries : **Epitamulla FCS 3 members, Dodampahala FCS 2 members**

Participants : **Manager, Berendina Development Services Ltd.**

Chamalie Jayalath, Project Coordinator, FCS Pilot Project

- **Objectives and aims**

The objective of the visit was to observe mutual learning for all the FCSs through a discussion.

- **Proceedings**

The members in FCS Societies and JICA & Berendina members reached Nonnawella FCS on 19th September at 10 a.m. the visitors were warmly welcomed by the members of Noonnawella FCS.

The president in Nonnawella Mr. Susantha Darmasena explained the history of Noonnawella FCS. In his speech he said that the FCS was started in 1989 with 40 members. At the beginning of the year using the shares of the members Rs. 200 loan scheme was started. With recoveries and with the membership deposits, essential deposits and Non-membership deposits the revolving fund was increased. At present loans in the range of Rs. 1,000, 5,000, 10,000, 60,000 loans are given with 16% annual interest rate. He explained that the assets of the bank is over Rs.3,000,000 and number of members is around 300.

Then the Manager explained how to keep the books in order. And the types of books kept with them. She mentioned in her speech that she is given Rs. 4,000 per month for her service.

The documents and books were studied by Epitamulla FCS 5 members, Dodampahala FCS 2 members and they appreciated their work.

Answering to a question raised by President of Dodampahala about the sureties the president said in order to get a loan a member should have 1/5 sureties of the loan applied for and he should have participated at 3 general assemblies per year.

Treasurer in Dodampahala FCS raised a question about the other income generating fields of the society and answering the question Mr. president said that the society has 50 chairs that are rented out to village functions.

After the vote of thanks and friendly discussion the meeting was ended at 1.30 p.m.

Discussion with the Noonawella President

Looking at the reports at Noonnawella from Epitamulla members

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : Foundation Laying Ceremony of the Bank Building at Epitamulla FCS					

Location : **Epitamulla, Kamburugamuwa**

Date : **8th September 2005**

Beneficiaries : **Epitamulla, Kamburugamuwa, FCS members**

Participants : **HIDEO Sakamoto, Deputy Team Leader, JICA Team**
Manager, Berendina Development Services Ltd.
D P Wickramasinghe, Consultant, JICA Team
Chamalie Jayalath, Project Coordinator, FCS Pilot Project
H K M Premadasa, Fisheries Society Cooperative Inspector

- **Objectives and aims**

Objective of the function was to erect a building to house the FCS bank since the previous bank building was washed by Tsunami Waves.

- **Proceedings**

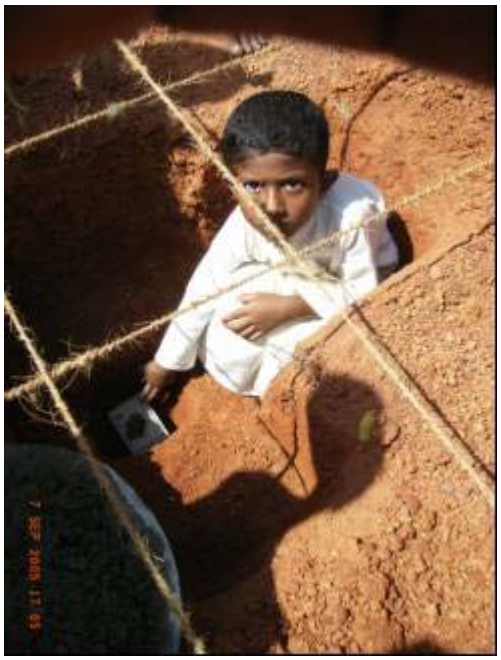
The party comprising HIDEO Sakamoto, Deputy Team Leader, JICA TeamManager, Berendina Development Services Ltd., D P Wickramasinghe, Consultant, JICA Team.

Chamalie Jayalath, Project Coordinator, FCS Pilot Project and K M Premadasa, Fisheries Society Cooperative Inspector.Visited the site for the bank building at Epitamulla for this event.Having granted a portion of the land belonging to the chief incumbent of the nearby temple of Samudragiri Viharaya the society had taken a decision to erect the building on this small portion of the land.

Through a discussion with and directed by the JICA office the above date was fixed for the ceremony. The above mentioned team headed by the deputy team leader Mr. Sakamoto, President, Secretary of the FCS and child from one of the families laid the foundation stones for the building.

Clearance of the place by members of the society before foundation lying

Foundation laying activities by the members



Laying the foundation stone by a small child of the society

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : Foundation Laying Ceremony of the Auction Hall at Noonnawella FCS					

Location : **Noonnawella, Gandara West**

Date : **22nd August 2005**

Beneficiaries : **Gandara West, Noonnawella, FCS members**

Participants : **RYO Ishimoto, JICA Team Member**
YOSHIYA Nakagawa, JICA Team Member
Manager, Berendina Development Services Ltd.
Chamalie Jayalath, Project Coordinator, FCS Pilot Project
H K M Premadasa, Fisheries Society Cooperative Inspector

- **Objective and aims**

The objective was to erect a building for a action hall facility since the FCS has no facility for that purpose and this is one of the activities given in the pilot project.

- **Proceedings**

The site was visited by the team headed by YOSHIYA Nakagawa and In the company of Messrs. RYO Ishimoto, JICA Team Member, JICA Team Member, Ubeysirinarayana, Manager of Berendina Development Services Ltd., Chamalie Jayalath the Project Coordinator, FCS Pilot Project, K M Premadasa, the Fisheries Society Cooperative Inspecto.

Having been welcomed by the organizing committee of the Noonawella FCS the visiting dignitaries were invited to grace the occasion laying the foundation stones for the building All the members of the party addressed the gathering and stressed importance of having unity and having this facility as well. Vote of thanks were delivered by the President of the society.

Foundation laying activities by the members

Laying the foundation stone by Mr. Ishimoto of Fisheries Consultant

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : Business Plan Preparation Training					

Location :	**Suru Uyana, Walgama, Matara**
Date :	**22nd & 23rd October 2005**
Beneficiaries :	**Epitamulla FCS 3 members, Dodampahala FCS 2 members Nonnawella FCS 1 members, Sahana Foundation 2 members, Orawatta FCS 2 members, Dodanduwa FCS 2 members, Enterprise Development Service Centre 2 members**
Participants :	**Manager, Berendina Development Services Ltd.**
	Chamalie Jayalath, Project Coordinator, FCS Pilot Project
Resource Person :	**A.M.U. Bandara**

- **Objective and aim**

Reason to conduct this workshop was to train a business plan preparation officer for each FCS. The main aim of this workshop was to give a training on management of the loan scheme according to the actual needs of the society members.

- **Selection of beneficiaries**

Participants for this business plan preparation workshop were selected through an interview at the JICA office. The selected 06 candidates in 3 FCS were A/L Commerce qualified, below the age of 30 years. They are not direct members of the 3 societies except one member and are family members of the society members. Not only the 03 FCS coming under our project but also another two FCS in Galle, and two members of Enterprise Development Service Centre of Matara participated at this workshop. Based on a request made to JICA by UNDP Office, the other members joined this workshop.

Evaluating and correcting the business plan prepared by trainers

- **Seminar Procedure I**

The workshop was started 9 a.m. all the members were participated on time. All the members identified each other with a game call "Name Game". Therefore, every body got to know each other very soon and in a very friendly manner. Then after implementing some rules and regulation for punctuality the workshop was started.

First, Mr. Bandara explained what a business plan was and why it was necessary to prepare a plan. He went on and explained in detail the business plan preparation. With the involvement of the participants a detailed business plan was explained including each and every item of the document on Marketing Income, Marketing expenses, Materials, Sales Income, etc during the first day.

- **Seminar procedure II**

In the evening session, the trainers were given to prepare a business plans in relation to their own trades as home work. As has been identified, the trainees were given three major areas such as for Coir Rope Industry, Maldive Fish making and sawing trade. The workshop was over for the first day at 5.30p.m.

In the second day, all the members were on time. The work started with a morning game. After reviewing the previous days work, the day's work was started. First, Mr. Bandara inquired about the problems faced in the process of preparing the plans. After giving solutions to them every participant's business plan was studied and mistakes corrected and the remedial measures if they face a problem while doing the work alone. Selected best three people who prepared business plans were selected.

The best three were given some gifts and all the participants who participated were given certificates for participating and following the workshop. Finally a feed back was taken

from every participant. They mentioned that the workshop was very useful for them and they learnt the short ways and easy methods for business plan preparation. They also mentioned that they improved their ability of preparing business plan in their villages. After some games the workshop ended.

Helping to the friends in preparation of business plan

Identifying each other

Receiving the gifts for winners

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title: Study Tour to Kotopola Multi Purpose Cooperative Center					

Location : **Deniyaya Road, Waralla**

Date : **15th October 2005**

Beneficiaries : **Epitamulla FCS 2 members,**
Dodampahala FCS 2 members
Nonnawella FCS 2 members

Participants : **Manager, Berendina Development Services Ltd.**
Chamalie Jayalath, Project Coordinator, FCS Pilot Project

- **Objective and aim**

It is mentioned in the pilot project that these FCSs should be exposed to the best practices observed by other similar agencies and seek ways and means of exchange of their products. Therefore, as a result of a direction given by our office at the steering committee meetings the 3 FCS's willed to visit Kotapola Cooperative society, the leading society recommended by the Fisheries Cooperative Inspector Mr. Premadasa.

- **Procedure**

The members in FCS Societies and JICA & Berendina members reached to Kotopola Multy Service Cooperative Center on 15th October at 10.30 a.m.

Then all the JICA Members with the FCS working committee participated at a meeting with Chairman Mr. Bandu Ranawake, Vice Chaiman Mr. Nimal Edirisinghe at Chairman's office. There they explained their vision and mission and the present situation of their society. Chairmen explained that the society started its activities in 1975 with 8,500 members and it has increased in 2005 up to 45,000.

The Vice chairman explained their different services.

Financial Services - Rural Banking systems 12.
Commercial activities - Sales outlets 42, Food cities 02, Ware Houses 05,
Filling Stations 02, Gas retailing shops 02, Mobile Trade 02,
Hardware 02 shops,
Industrial Activities - Cop Lanka Tea Factories 02, Cope Printers and Press,
Mechanical workshop
Transport Service
Montessori
Funeral Services
Channeling of medical doctors
Welfare Service.

They explained that their aim is to identify the changing market and focus on it and start up new businesses. As a result of that, two tea factories have been installed in their village. As a result, the people get a fair price for quality tea leaves and all the tea produced in those two factories are exported due to their high quality.

Vice Chairman mentioned in his speech that from their cooperative society 114705 have been is employed in various fields. He mentioned that their main aim is to make the employees happy and make them more and more qualified. To cater to that they conduct management training programmers too.

Explaining the financial Activities, maximum loan scheme issued is Rs.350,000. There are different loan schemes for self employments, government servants, and employees of other institutions Chairmen said the their society was recognized as the best co-operative society in Sri Lanka.

Ms. Chamalie inquired from the Chairman whether the society would like to have a close relationship with Fisheries Cooperative Societies by exchanging their products with FCS products such as Maldive fish, Dry fish etc. Then Mrs. Gaya, Assistant Manager in Noonnawella FCS said that they have good products of Coir Ropes. Answering to the questions chairman said that if the products were in good quality they were really happy to have a trade linkage with FCSs. FCSs were asked to send samples to their commercial manager.

Then all the members of FCS were accompanied to the conference hall by Mr. Dammika, Human Relation Officer and explained their office structure in detail. Then he had a very close discussion with the FCS working committee members about their capacities and present activities. Video film explaining the activities of the Kotapola Cooperative society was shown to.

There after, the visitors were taken to visit places of their activities as Tea Factories, mechanical workshops, Printing Press, Rural Banks, Ware Houses, Retail Shops etc.…
After the lunch at Kotopala MSC the FCS again visited to chairman's office for a discussion. Then he agreed to visit to the three FCS to study their activities and services with a view to have a close relationship with them in terms of trade links. Three FCs were invited to bring good products of their societies to Koapola MPCS. He also said that it's not difficult to come UP to a recognized place/higher level, if the committee members work with an ambition and dedication. He mentioned that there is a requirement for coir rope bags for collection of tea leaves and requested the FCS members to provide those bags if possible. Finally he thanked everybody for participation and the visit.
Mr. Narayana, Berendina Manager thanked the chairman for providing opportunity to make a visit to the Kotopala MSC and mentioned that a lot of lessons were learnt from them.
After the vote of thanks and friendly discussion the visit ended at 3.00 p.m

Having a discussion with the Chairman Mr. Bandu Ranawake with FCS members and JICA Team members

Visiting the Rural Bank and Study The Activities

Purchasing of quality tea

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP

Title : Foundation Laying Ceremony of the Bank Building and OBM Locker at Dodampahala FCS

Location : **Dodampahala South, Belikatuwella, Nilwella**

Date : **17th October 2005**

Beneficiaries : **Dodampahala, South, Belikatuwella, FCS members**

Participants: **Yuichiro Motumura, Team Leader, JICA team**
HIDEO Sakamoto, Deputy Team Leader, JICA Team
Manager, Berendina Development Services Ltd.
Chamalie Jayalath, Project Coordinator, FCS Pilot Project
H K M Premadasa, Fisheries Society Cooperative Inspector

Foundation Stone laying by the team leader Yuichiro Motomura

Participants at the ceremony

- **Objectives and aims**

Objective and aim of the activity was to help the FCS Dodanpahala to recover from the effects from Tsunami under the pilot project and rehabilitate them by providing a buildings for their bank and OBM locker plus net mending area.

- **Proceedings**

The team comprising of Yuichiro Motumura, Team Leader, JICA team,HIDEO Sakamoto, Deputy Team Leader, JICA Team, Manager, Berendina Development Services Ltd, Chamalie Jayalath, Project Coordinator, FCS Pilot Project, H K M Premadasa, Fisheries Society Cooperative Inspector visited Dodanpahala for this purpose.

Welcomed by the Working committee including the president Mr. Nimal and the Treasurer Mr. Nimal the party was led to the location and invited guests Mothomura, Sakamoto, Berendina manager and society members to lay the foundation stones for the both buildings the bank and the OBM locker plus the net mending area.

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : Opening Ceremony of the Bank Building at Epitamulla FCS					

Location : **Epitamulla, Kamburugamuwa**

Date : **4th November 2005**

Beneficiaries : **Epitamulla FCS members**

Participants : **GOTO Ko, Assistant Resident Representative, JICA, Sri Lanka Office**

SATOSHI Ogita, JICA Team Member

Manager, Berendina Development Services Ltd.

D. P. Wickramasinghe, Consultant, JICA Team Member

Chamalie Jayalath, Project Coordinator, FCS Pilot Project

H K M Premadasa, Fisheries Society Cooperative Inspector

N H Gamage, Coordinator, Fisheries Department

- **Objectives and aims**

The prime objective was to help the Tsunami affected Epitamulla FCS to recover from the disaster. In order to facilitate the financial transactions of the society reconstruction of the bank building was necessary. Ceremony was arranged to mark this occasion.

- **Proceedings**

The party comprising Messrs. GOTO Ko, Assistant Resident Representative, JICA, Sri Lanka Office, SATOSHI Ogita, JICA Team Member, Indika Cabraal, Program Officer of JICA, Manager, Berendina Development Services Ltd., D. P. Wickramasinghe, Consultant, JICA Team Member, Chamalie Jayalath, Project Coordinator, FCS Pilot Project, H K M Premadasa, Fisheries Society Cooperative Inspector visited the building premises and warmly welcomed by the society members. The building was declared open by Mr.Goto by cutting a ribbon. Followed by this event was a tree planting ceremony in the bank premises by Messrs. Goto and Ogitha.

The occasion was marked by traditional lighting of coconut oil lamps. The gathering of society members and others were addressed by Messrs. Goto, Berendina, Ogitha, Ubeysirinarayana, Wickramasinghe, Premadasa and some others.

Group Photograph of the participants and the beneficiaries

Planting trees at the memorial day

GOTO Ko, Assistant Resident Representative, JICA,Sri Lanka Office Addressing the gathering

Lighting the Lamps
Borne by children

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP		Small Industry PP	x	Fishery Corporation PP
Title : General Assembly at Nonnawella FCS					

Location : **Gandara West, Noonnawella FCS, Noonnawella**

Date : **05th October 2005**

Beneficiaries : **Nonnawella FCS members**

Participants : **Mr. S. Kalansooriya, Programme Officer, UNDP Office Galle**
Mr. D.P.Wickramasinghe, Consultant, JICA Project
Chamalie Jayalath, Project Coordinator, FCS Pilot Project

- **Objectives and aims**

The main objective was to observe monthly gathering of the FCS Noonawella and to create awareness on the rules regulations connected with the UNDP grants to FCSs.

- **Proceedings**

The members in FCS Societies and JICA members reached to Nonnawella FCS on 05th October at 3 p.m. for their general assembly which is generally conducting on 5th of each month. The visitors were warmly welcomed by the members of FCS Noonnawella.

- More than 120 members have participated at the meeting.
- First the religious activities were observed and one minute silence for the members passed away by Tsunami.
- Previous meeting's minutes was read by the Secretary.
- The president, Mr. Susantha Darmasena called upon Mr. S. Kalansooriya to speak a few words about the UNDP loan scheme.
- Responding to that Mr. Kalansooriya explained the ongoing activities done by UNDP as Housing Work in Kalutara and Galle, Fisheries harbor construction and ice plants construction and micro credit disbursement to Fisheries Cooperative Societies. He said that Nonnawella FCS would get Rs. 2,700,000 and capacity building equipments including furniture items, Fax machine and telephone costs about Rs. 150,000. The beneficiaries list should be submitted to UNDP office and JICA office every month. He explained how the money would be disbursed to FCS societies. It is 10% of the grant as first installment, 40% as the second and 50% as the final. From the beneficiaries 30% should be women. He explained that all the money allocation and selection of the beneficiaries should be under the laws and conditions as previous. He also requested from the members to repay the loans already taken as soon as possible in order to make it as a viable revolving fund as possible.
- Then the president of Nonnawella explained the history of Noonnawella FCS. In his speech he said that the FCS was started in 1989 with 40 members. At the beginning of

the year using the shares of the members Rs. 200 loan scheme was started. Making use of recoveries, the membership deposits, essential deposits and non-membership deposits the revolving fund was increased. As a result now they are in position to give loans to the value of Rs. 1,000, 5,000, 10,000, 60,000 loans with 16% annual interest rate. He explained that the assets of the bank is over Rs.3,000,000 presently and number of members is around 300.

- Then the Manager explained how to keep the books relevant to banking transactions in order and the types of books kept with them. She mentioned in her speech that she was paid Rs. 4000 per month for her service.
- The documents and books were studied by Epitamulla FCS 5 members, Dodampahala FCS 2 members and they appreciated their work.
- Answering to question raised by President in Dodampahala about the surety deposits and the president said in order to get a loan a member is expected to have 1/5 surety of the loan applied for and he/she should have participated at 3 general assemblies per year.
- Treasurer of Dodampahala FCS raised a question about the other income generating areas of the society. Mr. President answered and said that as an additional 50 chairs are rented out to village functions.
- After the vote of thanks and a friendly discussion the meeting was ended at 1.30 p.m.

Reading the minutes of last meeting by the secretary

Expressing the ideas of a member

Listening to the audience

ANNEX 5-6 Minutes of the Steering Committee of Fishery Cooperative Societies Support Pilot Project

(Original Record)

Minutes of the 1st Meeting of Steering Committee in Fisheries Co-operative Societies Support Pilot Project

The Japan International Cooperation Agency (JICA) -Matara
July 05

Persons :
H.K.M.Premadasa, Fisheries Co-operative Inspector, Matara
M.P.Ranjani, Secretary, Fisheries Co-operative Society, Dodampahala- South
M.M.Nimal, President, Fisheries Co-operative Society, Dodampahala- South
Y.G.Sunil Shantha, Treasurer, Fisheries Co-operative Society, Dodampahala- South
D.K.Lalitha, President, Fisheries Co-operative Society, Epitamulla
K.G.Amila Damayanthi, Secretary, Fisheries Co-operative Society, Epitamulla
W.G.Tushara Indika, Fisheries Co-operative Society, Epitamulla
L.W.Susantha Darmasena, President, Fisheries Co-operative Society, Noonawella
K.G.Premasiri, Treasurer, Fisheries Co-operative Society, Noonawella

JICA Members :
Mr H. Sakamoto Consultant
D.P.Wickramasinghe, Consultant
Chamalie Jayalath, Coordinator of FCS Support Pilot Project

The first steering committee meeting of FCS was held at JICA Project Matara office. One attendance from each counter-part organization and two board directors (president and secretary) from each FCSs had attended the meeting. Following agenda were discussed with the chairmanship of Mr. Jagatha Godakanda of Berindina Foundation (NGO).

(i) Explain the aim of JICA in this project
(ii) Roles and activities in FCS pilot projects
(iii) Responsibilities of FCS: to obtain a letter from Coastal Conservation Department for clearance of land which facilities will be constructs
(iv) Needs assessment in Community
(v) Reformation of Epitamulla FCS.

The Project Team asked two questions, the first was loan recovery after six month from the disaster. The second was the number of boats damaged in the each community. At the end of the meeting the participants recognized the purpose and aim of the meeting, and agreed with the conditions of the Project.

Minutes of the Meeting of 2nd Steering Committee in Fisheries Co-operative Societies Support Pilot Project

The Japan International Cooperation Agency (JICA) -Matara
August 11.08.05

Persons :
H.K.M.Premadasa, Fisheries Co-operative Inspector, Matara
M.P.Ranjani, Secretary, Fisheries Co-operative Society, Dodampahala- South
M.M.Nimal, President, Fisheries Co-operative Society, Dodampahala- South
Y.G.Sunil Shantha, Treasurer, Fisheries Co-operative Society, Dodampahala- South
D.K.Lalitha, President, Fisheries Co-operative Society, Epitamulla
K.G.Amila Damayanthi, Secretary, Fisheries Co-operative Society, Epitamulla
W.G.Tushara Indika, Fisheries Co-operative Society, Epitamulla
L.W.Susantha Darmasena, President, Fisheries Co-operative Society, Noonawella
K.G.Premasiri, Treasurer, Fisheries Co-operative Society, Noonawella

JICA Members :
D.P.Wickramasinghe, Consultant
Chamalie Jayalath, Coordinator of FCS Support Pilot Project

- Second Steering Committee meeting of the FCS support pilot project was called to order at 2 p.m. in the JICA - Matara office. Welcome address was given by Ms. Chamalie, Coordinator of FCS support pilot Project and the objectives of the meeting were briefly described.

- At the beginning, Ms. Chamalie Jayalath tabled the Minutes of the previous Steering Committee meeting. It was confirmed by all members of the Steering committee present.

- Mr. Wickramasinghe explained the importance of reconstruction of the FCS. He emphasized the importance of collecting missing details and documents. Responding to Mr. Wickramasinghe the President of Epitamulla FCS said that they had reconstructed their society by appointing a board of members. They also said that they are now in a process of rewriting and recollecting the missing data. As a result of reconstructing the society new members enrolled to the society is 40.

- The presidents in both Dodampahala and Noonawella said that because of JICA involvement in their societies, number of new admission to the societies has increased. And the participation of members who were inactive earlierto the meetings also has increased.

- Next issue was to discuss the construction work of FCS buildings. As the constructor agreed to get the service from the FCS members they were requested to give a list of members from the society for masonry work and labours, the members agreed to submit it soon as possible.

- Mr. Wickramasinghe explained the importance of having a seminar to identify the needs for each and every FCS and asked them to discuss it among the members before they come to the meeting. It was confirmed by Mr. Premadasa, Inspector of FCS. The dates were fixed for need assessment workshops on 29th & 30th of August for Nonnawella and Epitamulla FCS.

- Explained the present progress in credit Plus Services conducted by UNDP by Mr. Wickramasinghe and asked Epitamulla and Dodampahala FCS to submit the society details as soon as possible. And announced they can be neglected if they do not take necessary action to submit the data. Mr. Premadasa explained the importance to carryout existing rules and regulations when loans are used even after they received the UNDP credit. Mr. Sumanadasa, President of Noonawella FCS promised to follow the rules.

- Then Ms. Chamalie informed the FCS members and their children to submit letters, drawings and articles to the JICA news letter "WERA". And the members were happy to submit the articles. Mr. Wickramasinghe explained how it can help to improve a child's future.

- Mr. Indika, Committee member of Epitamulla FCS, thanked JICA for the support and promised to strength the society.

- The next meeting was scheduled to have on 8th September 2005 after vote of thanks by Coordinator the meeting adjourned at 4.00p.m.

Minutes of the Meeting of the 3rd Steering Committee in Fisheries Co-operative Societies Support Pilot Project

The Japan International Cooperation Agency (JICA) - Matara
September 08.09.05

Persons :
H.K.M.Premadasa, Fisheries Co-operative Inspector, Matara
M.P.Ranjani, Secretary, Fisheries Co-operative Society, Dodampahala- South
Y.G.Sunil Shantha, Treasurer, Fisheries Co-operative Society, Dodampahala- South
D.K.Lalitha, President, Fisheries Co-operative Society, Epitamulla
K.G.Amila Damayanthi, Secretary, Fisheries Co-operative Society, Epitamulla
W.G.Tushara Indika, Fisheries Co-operative Society, Epitamulla

L.W.Susantha Darmasena, President, Fisheries Co-operative Society, Noonawella
K.G.Premasiri, Treasurer, Fisheries Co-operative Society, Noonawella

JICA Members :
D.P.Wickramasinghe, Consultant
Chamalie Jayalath, Coordinator of FCS Support Pilot Project

Berendina Development Services :
Ubesiri Narayana

- Third Steering Committee meeting of the FCS support pilot project was called to order at 2 p.m. in the JICA - Matara office. Welcome address was given by Ms. Chamalie, Coordinator of FCS support pilot Project and the objectives of the meeting were briefly described.

- At the beginning, Ms. Chamalie Jayalath tabled the Minutes of the previous Steering Committee meeting. It was confirmed by all members of the Steering committee present.

- Manager of the Berendina Development Services Mr. Narayana explained the present progress of the project. In his speech he mentioned about the misbehavior of the President in Dodampahala FCS and he explained the constraints we have faced in construction work. He also mentioned that we have started construction of Bank building in Epitamulla on the same day. In his speech he said that to start the construction.

- Mr. Wickramasinghe wanted to discuss the progress of the events discussed in the previous steering committee. As a result he asked from the members to describe about the book keeping work. The president in Noonnawella said that they have not destroyed any documents from tsunami, now they maintain and keep records in much better order. The treasurer in Dodampahala first excuse for the mistake of the President and said the bank building was destroyed by the Tsunami, but they have saved the documents. Now they also keep records and maintain documents as usual. In Epitamulla they destroyed all the documents. Now they are in a process of collecting the data. Mr. Wickramasinghe also inquired about the loan recovery of the people in Epitamulla. Mrs. Lalitha President in Epitamulla FCS explained that they have decided to collect the loans after giving six months grace period to the members. From last month onwards the loans are recovering in small amounts.

- Mr. Premadasa asked to prepare a list of names who have taken loans and there monthly interest from last month onwards and asked to send letters to them mentioning their balance to be paid in coming general meeting on 10th September.

- Next issue was to discuss about the resolve the problem of land. Ms. Chamalie mentioned that to start the construction work in all three places we have to wait till we get the letter from Coastal Conservation Authority. She also said that Mr. Shelton in Department of Fisheries has sent a letter to Ministry of Fisheries asking permission to start construction in Dodampahala which is a land belongs to the Department of Fisheries. In Epitamullla the place decided to build the OBM Locker is belong to private person. So we request them to fasten the procedure of it. Mr. Narayana explained the importance of these legal issues to start the construction work.

- Next as a request by Mr. Sumanadasa President in Noonnawella FCS, to get a building with tiled floor, Ms Chamalie explained the appearance about the buildings after finish and she said that the buildings would be without plastering. The all the members were raised that they would like to get a building which is a complete one. And they explained the difficulty to work in unfinished rough walled building. Treasurer in Dodampahala FCS told the bank building is a place where every time people are coming and going so they request to give a building after completion. The Noonnawella president explained, in order to increase the quality of fish it is very important a building with a tiled floor. And they explained if the building is not tiled one the usage of the building would be less.

- Then Mr. Sakamoto explained the difficulty of getting another budget to the people. However he asked to collect estimation for it. Mr. Wickramasinghe also said that his personnel view also it should be a completed building; he explained it will also be a black mark to JICA.

- Ms. Chamalie explained about the study tours among the 3 FCS & Other FCS & to other CS. As a result Dodampahala and Epitamulla members decided to visit Noonnawella on 19th September to study the activities in Noonnawella. And a study tours to Godawaya & Oorawatta FCS were decided to visit in the future. And also inland societies Kotapola Multy purpose Cooperative Society & Morawakkorale Tea manufactures Cooperative Society was decided to visit.

- Ms. Chamalie mentioned according to the identified needs by Need Identification workshops, Seminars will be conducted in the Future.

- Then Ms. Chamalie informed the FCS members and their children to submit letters, drawings and articles to the JICA news letter “WERA”.

- And also Ms. Chamalie distributed small blank papers to each society to get some paintings from the small children in age between 3 - 8 for embedded in tiles and people were happy.

- Explained the present progress in credit Plus Services conducted by UNDP by Mr. Wickramasinghe and asked informed that they have invited to a meeting on 9th Friday at UNDP office. Mr. Premadasa explained even after getting money from UNDP rules and regulations should follow will be the same.

- The next meeting was scheduled to have on 13th October 2005 after vote of thanks by Coordinator the meeting adjourned at 4.00p.m.

Minutes of the Meeting of the 4th Steering Committee in Fisheries Co-operative Societies Support Pilot Project

The Japan International Cooperation Agency (JICA) - Matara
October 14.10.2005

Persons :
H.K.M.Premadasa, Fisheries Co-operative Inspector, Matara
M.M.Nimal, President, Fisheries Co-operative Society, Dodampahala- South
Y.G.Sunil Shantha, Treasurer, Fisheries Co-operative Society, Dodampahala- South
R.K.Rasangika, Manager, Fisheries Co-operative Society, Epitamulla
K.G.Amila Damayanthi, Secretary, Fisheries Co-operative Society, Epitamulla
W.G.Tushara Indika, Fisheries Co-operative Society, Epitamulla
K. B. Sama, Manager, Fisheries Co-operative Society, Noonawella
S.H.Gaya Kumudini, Assistant Manager, Fisheries Co-operative Society, Noonawella

JICA Members :
D.P.Wickramasinghe, Consultant
Chamalie Jayalath, Coordinator of FCS Support Pilot Project

Berendina Development Services :
Ubesiri Narayana

- Fourth Steering Committee meeting of the FCS support pilot project was called to order at 2 p.m. in the JICA - Matara office. Welcome address was given by Ms. Chamalie, Coordinator of FCS support pilot Project and the objectives of the meeting were briefly described.

- At the beginning, Ms. Chamalie Jayalath tabled the Minutes of the previous Steering Committee meeting. It was confirmed by all members of the Steering committee present.

- Manager of the Berendina Development Services Mr. Narayana explained the present progress of the project. In his speech he mentioned about the positive thinking

workshops conducted in Epitamulla FCS. He explained the present progress of construction work. And to display the bank name in top of the building. He mentioned that for additional construction work money transfer from other project is already done and a complete building can be given at the end.

- Mr. Wickramasinghe wanted to discuss the progress of the events discussed in the previous steering committee. As a result he asked from the members to describe about the activities given to them in last meeting. In response to that, Manager in Epitamulla FCS said recovering of the loans has increased. And the new manager is keeping all the documents in detail. They also told that the UNDP Bylaws were accepted from General committee meeting. According to the new regulations, New member can take loans after 3 months, Should finish the overdue loans before December, Depend on the need Money can be accepted.

- Next issue was to discuss about construction work. Ms. Chamalie mentioned that the land issues were solved for construction in Dodampahala. The Tresurer in Dodampahala mentioned the foundation laying ceremony is fixed on 17th October and all the other two societies were also openly invited to the ceremony.

- Assistant Manager in Noonnawella said that they are not known much about the land clearance work for Auction Hall construction because all the activities has done by the President. Then the coordinator reminds them about the dead line for the construction is on 20th October. Then the Assistant Manager requested to extend the date because the President is out of the city. Then Mr. Narayana explained the importance of having the society and to appoint members. He explained even though in absence of President the other society director board should take responsibilities in their work. Then Ms. Gaya promised to look into that matter and discuss with the members and inform before the week after next. Epitamulla members told that they are in a great need of constructing the net mending building. But due to the problem of a land they are immovable. Mr. Narayana explained immediate action should be taken because the money will be going back to Japan in December.

- The next item was to discuss about the present progress of UNDP Grant scheme. In response to that all three societies told that they accepted the bylaws in general meetings. Then with a question raised from Treasurer in Dodampahala FCS said, the loan is giving to 6% interest but they give 12% interest for savings. He mentioned because of that the society lose its income through that. Mr. Wickramasinghe said we include these regulations because its important to work properly and he mentioned these regulation are flexible and can be change according to the society needs. So he said if there is a need they can adjust it accordingly.

- The next item was to discuss about the study tour fixed on 19th to Kotapola FCS. And the objectives of it was also discussed.

- Ms. Chamalie mentioned according to the identified needs by Need Identification workshops, Seminars will be conducted in the Future.

- Then Ms. Chamalie informed the FCS members and their children to submit letters, drawings and articles to the JICA newsletter "WERA".

- The next meeting was scheduled to have on 09th October 2005 after vote of thanks by Coordinator the meeting adjourned at 4.00p.m.

Minutes of the Meeting of the 5th Steering Committee in Fisheries Co-operative Societies Support Pilot Project

The Japan International Cooperation Agency (JICA) - Matara
October 09.11.2005

Persons :
N H Gamage, Coordinator, Department of Fisheries and Aquatic Resources
M.M.Nimal, President, Fisheries Co-operative Society, Dodampahala- South
Y.G.Sunil Shantha, Treasurer, Fisheries Co-operative Society, Dodampahala- South
K.G.Amila Damayanthi, Secretary, Fisheries Co-operative Society, Epitamulla
W.G.Tushara Indika, Fisheries Co-operative Society, Epitamulla
L.W.Susantha Darmasena, President, Fisheries Co-operative Society, Noonawella
K.G.Premasiri, Treasurer, Fisheries Co-operative Society, Noonawella

JICA Sri Lanka Office:
Mr. Indika Praneeth Cabral

JICA Members :
Chamalie Jayalath, Coordinator of FCS Support Pilot Project

Berendina Development Services :
Ubesiri Narayana, Manager

- Fifth Steering Committee meeting of the FCS support pilot project was called to order at 2 p.m. in the JICA - Matara office. Welcome address was given by Ms. Chamalie, Coordinator of FCS support pilot Project and the objectives of the meeting were briefly described.

- At the beginning, Ms. Chamalie Jayalath introduced our new guest Mr. Mr. Indika Cabral from JICA Sri Lanka Office. He gave a brief introduction about JICA activities and he asked from the members to keep a close relation with JICA Matara office, especially with the coordinator and with Berendina Development Services. He also mentioned aids will not come everyday, so the society itself have to go alone. He mentioned the aids we got with the Tsunami should manage properly.

- According to the agenda the next item was to the Manager of the Berendina Development Services Mr. Narayana to explain the present progress of the project. In his speech he mentioned about the activities conducted in the month of November as Opening Ceremony of the Bank building at Epitamulla, Business Plan Preparation Workshops, Foundation Laying ceremony at Dodampahala, Study Tour to Kotopola etc. He also mentioned in his speech as the project is going to be over the trainings and seminars also should conducted in this month. He mentioned hygienic handling of fish is the area which we have to look into. As a reply to that Mr. Premasiri, the treasurer, Nonnawella FCS mentioned in his visit to Thailand he saw a good practice which is they breed fish fingerlings and they again put to the sea. He mentioned in Sri Lanka also that kind of good practices should implemented by the government. In addition to that using of prohibited fishing equipments also should stop was his idea.

- Next issue was to discuss about construction work. Ms. Chamalie mentioned that from the out of 6 buildings only three buildings are successful at the moment. According to the 4th steering committee meeting, Noonawella and Epitamulla were given dead lines to solve the land issues until 20th October. She told based on the request made by the members in Epitamulla it was extended to 15th November. She told that the Nonnawella FCS has submitted a letter telling that they do not need the OBM Locker building because of the problem of land clearance. She asked about the present progress about the land clearance work at Epitamulla. Replying to that Indika, committee member said they are in a need of a building but there is no proper place. So they also withdraw it. Replying to that Mr. Sunil, Treasurer from Dodampahala FCS reminded about the letter submitted to the Co-coordinator in the month of October requesting a community hall to their society. And asked whether their any possibility of getting it. Then the coordinator inquired about it from other two societies and they were agreed. But she mentioned she will try and ask it from her head and give a reply. Mr. Narayana mentioned about the difficulty of getting help from the local authorities and the government institutes. He mentioned lack of cooperation from them caused dealing of the project work.

- The next item was to discuss about the present progress of UNDP Grant scheme. The president in Dodampahala mentioned that getting delay of the UNDP Grant has caused much damage to the societies. The president in Noonnawella submitted a list

of beneficiaries of the UNDP Grant scheme. Ms. Chamalie mentioned that she discussed it with UNPD and their reply was that the applications have sent to Colombo UNDP office and they are also waiting for their reply.

- Ms Chamalie mentioned the tile work is also going well and the incomplete places of the Epitamulla bank building will also will be proceed as soon as we get them.

- Ms. Chamalie mentioned according to the identified needs by Need Identification workshops, Seminars will be conducted in the Future.

- Then Ms. Chamalie informed the FCS members and their children to submit letters, drawings and articles to the JICA news letter “WERA”.

- The next meeting was scheduled to have on 8th December 2005 after vote of thanks by Coordinator the meeting adjourned at 4.00p.**m**.

ANNEX 5-7 Records of Evaluation Workshop on Fishery Corporative Society Support Pilot Project

(Original Record)

PART 5-1 Epitamulla Fishery Cooperative Society

Venue: Meeting hall of the Epitamulla refugee camp
(Majority of Epitamulla people including FCS members live in refugee camp)

Date: 10.December.2005 at 3 p.m.

Session 1 Assistance Offered to the FCS (except JICA pilot project)

What were the assistances offered to your FCS?

	Supporter	Contents of Assistance
1	Divisional secretary Weligama & Grama Niladari District Secretary Matara	• Issue of coupon for relief assistance • Payment of Rs. 5,000= to each family by Government. • Payment of Rs. 375/= to each family • Supply of water and Kitchen equipment • Payment of Rs.2,000/= to each family • Awareness on Tsunami for members • Psycho social programs • Re-issue of National Identity Cards • Medical facilities like clinics for camp inmates • Supply of OBM boats to some families
2	The nearby temple	• Temporary shelter and food for members for a few weeks. • Donation of the land for temporary housing and Donation of the land for the FCS bank building • Coordination with organizations by the chief priest to obtain assistance • Assurance by the chief incumbent to provide 15 houses
3	Sewa Lanka.	• Supply of Kitchen equipment and Temporary shelter • Supply of water and electrical connections to houses • Employment for some members • Dry food rations for families • Temporary community hall • Supply of baskets for drawing water • provide a TV to the society
4	Red Cross Ceylinco Co. Sanasa	• Donation of a tent tarpaulin for shelter • Donation of home appliances and clothes and toilet kits • Supply of medicine & kitchen equipment • Donation of a string hopper making machine • Donation of 10 OBM boats & fisheries equipment • Donation of 2 sewing machines • Donation of Rs. 1,000/= • Donation of 2 push cycles • Kits for carpenters and masons

	Supporter	Contents of Assistance
5	Agromart Foundation Sarvodaya Movement	• Donation of one boat • Donation of sewing machines • Donation of coir yarn machines and coir • Donation of tent clothes • Donation of mats mattresses & kitchen equipment • Donation of mosquito nets • Business plan training

Session 2 Assistance of JICA Pilot Project

1	Concerning Social Capital	• Re- formulate the FC society that was inactive. • Guidance given on how to work effectively • Introduction of the FCS to other FC Societies • Education tours to other leading Cooperative societies • Guidance through visits to other FCS and steering committee meetings.
2	Concerning Human Capital	• Business plan training for the selected two youths to assist the bank loan granting process • Training for Maldive fish making • Awareness on disaster management • Revitalization of the leading members of the society.
3	Concerning Financial Capital	• Promise to provide financial assistance from UNDB to the society. • Enactment of by laws concerning the UNDP funding • Guide the society for loan program.
4	Concerning Physical Capital	• Donation of the FCS bank building. • Promised furniture and other required items to the FCS bank building. • Other various items donated by the NGOs and the Government agencies

Session 3

Questions on FCS's capacity and assets before and after JICA's assistance

3-1 Institutional Capacity

	Evaluation Item	Score	Comments
1	Understanding community need	A	Significant improvement. Because they are from same area. Before Tsunami they know each other and now they understand each other's needs very well.
2	Fairness of Management	A	Significant improvements. Society officials continue their communication link with other members very well and they can understand society members' opinions.
3	Trust among members	B	Some improvements. Because before Tsunami they were in one community. They know each other to a certain extent.
4	Internal communication	A	Good improvement. All the members get automatically activated on urgent needs
5	Involvement of members	C	No improvement. Participation of the members in activities show no improvement

	Evaluation Item	Score	Comments
6	Information access	B	Some improvement. There is some barriers for information access To society. It is special for government institute.
7	External negotiation	B	There is some improvement. They communicate with other organizations to certain extent for needs
8	Cooperate with other SCF	C	No improvement. They have relationship at individual level.
9	Contribution to the outsiders	A	Significant improvement Participation at religious activities
10	Contribution to the camp life	B	Some improvement. The every person of the camp contribute to the camp life. For example general cleaning, group activities.
11	Contribution from the state sector	A	Significant improvement. The optimum support from the Fisheries cooperative inspector
12	The influence by members to decision making	B	Some improvement. The criteria for loan granting procedure was changed according to the needs

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Business plan preparation for two selected persons	A	These two persons assist the loan applicants to submit their applications with business plans.
2	Maldive fish making training	A	Now they have gained new knowledge in Maldve fish making using new mew methods that will guarantee a good market
3	Positive thinking workshop	A	All camp people think they were very bad situation and they cannot back to their normal life. Now their minds are changed and they think they can recover.
4	JICA news letter		Sharing knowledge and gathering knowledge It is supply good example for how to manage this kind of natural disaster.

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	A financial grant from UNDB for loans to its members	A	The society of the opinion that their financial strength will be enhanced
2	Increase in savings	B	Some improvement
3	Increase in deposits and recoveries	B	Some of the outstanding loans are being recovered

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Donation of a bank building	A	The society is in position to resume its banking activities
2	Some of the families have got OBM boats	B	The members who have got boats are financially stable
3	Permanent housing	A	Some of the families will get permanent houses soon
4	Lend office cupboard, stationery and white board for camp society	A	

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

THE Fisheries Cooperative Society think that Institutional capacity being built is more important than ay other area since it ensures sustainability and secondly it is the building of human resources that is important as it will strengthen the society and last comes the physical capacity. As JICA does all theses activities the society appreciates the implemented activities

Session 5 Quantitative Indicators

	Indicator	**Data**	**Before**	**After**
1	Number of general meeting		12	07
2	No of persons participated	Inform.	Not available	86
3	Participated rate of general meeting		60%	95%
4	Amount of saving		Rs. 8000/=	
5	Total of loan issues		Rs. 8000/=	
6	Recovery rate		100 %	
7	New income generation		03	
8	Purpose of loan	For Medical treatment and other emergencies		
9	Activities of the working committee	Decision making and approving loans to members		

No:	**Name**
1	Ms.P.Genawathi
2	Ms.K.G. Amila Damayaththi
3	Ms.D.K. Lalitha
4	Ms.G. Shanthi
5	Mr.W.G. Thusara Indika
6	Ms.N.H. Sugunawathi
7	Ms.T.V.K.Premanadini
8	Ms. H.M.S.Kalyani
9	Ms. Daya Ranjani
10	Ms.A.V. Premalatha
11	Ms. W.B.S. Nanisi
12	Mr. Bindu Priyadrsena
13	Mr. Ajith Samantha
14	Ms. Karuna Kapugama
15	Ms. H.K.A. Nalani
16	Ms. D.K. Rasagika
17	Mr. D.K. Ariyadasa
18	Ms. B.S. Chandana
19	Mr. H.K.M. Premadasa
20	Mr. G .Manamperi

PART 5-2 Noonnawella Fishery Cooperative Society

Venue: Meeting hall of the Noonnawella FCS

Date: 15.December.2005 at 9 a.m.

Session 1 Assistance offered to the Society (except JICA pilot project)

	Supporter	**Contents of Assistance Noonnawella Fisheries Cooperative Society**
1	Divisional secretary & Grama Niladari	• Rs.40000 relief assistance for fishing Nets • Relief assistance of Rs.5000 per month per family Rs 375/- worth of Food relief assistance • Tents for temporary shelters • Boat engine parts, and Fiber received to repair damaged boats • Boats Engines • Books for school children • Mattress, bed sheets, and some household equipments • Demarcated100 meter buffer zone
	Red Cross society	• Mosquito Nets and Medicine • Training on First Aid • Know how on maintaining camp Hygienic conditions • Toilet kit consisted with Tooth brush, tooth paste, soap etc • Tents for temporary shelters
3	World vision	• Assistance to rebuild damaged houses • Kerosene cookers • Plastic utensils(bucket ,basin ,Mat etc.)
4	Oxfam	Training on self defense Hand operated coir machine and coir fiber Construction of toilets Plastic chairs and mosquito coils Distribution of Sewing machine
5	Isuru Foundation	Spectacles for elderly people Conducted Mobile Health camps Push Bicycles Equipments and tools to start self employment
6	Earnest and Young	Few new boats replaced for damaged boats
7	Sarvodaya	Traditional tools to manufacture Pillow Lace Furniture Milk food for children Constructed common well Constructed rural roads

Session 2Assistance of JICA Pilot Project

1	Concerning Social Capital	• Motivation to Formulate the camp society • Developed inter relation ship between FCS • Established steering committee and provide necessary guidance to improve the society activities • Peace, friend ship and interpersonal relationship developed • Skills developed to managed society activities
2	Concerning Human Capital	• Training on self employment • New Technology transfer programmes • Training on Maldivian fish • Entrepreneurship development training Children competitions organized by “Vera” news letter motivated children participation • “Vera” newsletter shared the Japanese experiences in Disaster management • Awareness created on Disaster management • Training on Manufacturing of Maldivian fish
3	Concerning Financial Capital	• Assistance given to obtained UNDP Micro finance fund coordinated UNDP to obtained Rs.272000 to FCS
4	Concerning Physical Capital	• Fish Auction Hall • Out Boat Motor Locker • Coordinate to get Telephone and Fax Machine from UNDP

Session 3

Questions on FCS’s capacity and assets before and after JICA’s assistance

3-1 Institutional Capacity

	Evaluation Item	Score	Comments
1	Understanding Community Need	B	Needs identified only among their members, Now society analyzed community needs in a broad manner.
2	Fairness of Management	A	Executive committee(EC) takes great interest on their responsibilities. Members always keep in touch with the EC.Dealing of JICA activities was fair and impartial.
3	Trust among members.	C	Same stranded maintained.Handling of JICA project activities by the society shows great improvement among members.
4	Act according to the situation	A	Close relationship developed among community .People developed more attachment
5	Involvement of members	C	Members were motivated from the society activities. They volunteered to work during the construction work.
6	Access to Information	B	Available information related to external organizations.
7	Negations with external organizations	A	Negations capacity has improved with the constraints arise on Land matters.
8	Inter Relation ship with other FCS	B	Some development with Dodampahala FCS
9	Society involvement towards Extra activities	B	Few religious activities coordinated by the society

	Evaluation Item	Score	Comments
10	To What extent society helps to the Membership	B	Society always consider the grievance of the members and take positive decisions in favor of their members.
11	Relation ship with State organizations	D	Poor involvement .Only few Dept: take care on their activitiesEg:
12	The influence by members for decision making	A	Members made suggestions and new proposals at the annual /committee meetings.

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Skills development	A	Identified hidden capabilities and support to developed. Eg .Addressing and conducting of meetings, Skills on drawing, Negotiations.
2	Motivation	A	New proposal to held Exhibition Eg:Fish Products using new technology.
3	Change of Attitudes.	B	Positive thinking among members.

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Management	A	Pass experience and recent training useful to develop management capabilities
2	Financial strength	A	UNDP funds strengthen the existing situation.
3	Capacity to handle Bigger amount	A	Pass experience and new By Laws will help to handle bigger transactions.

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Assets received	A	Long term investment for the society Eg: Bank building ,OBM locker, rehabilitation of action hall.
2	Maximum utilization of assets	A	New income avenues can be introduce Eg: Nominal fees for using action hall.

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

During the project period. "Co-assistance" program mainly supported through the FCS.JICA worked as a facilitator to enhance the FCS capacity.

All the participants unanimously agreed on JICA approach and also they express the approach is more effective, sustainable, and most suitable approach towards the strengthening of grass root level organizations. The participants specially appreciated the JICA approach fallowed to strengthen the existing society and recognition given to the society as a representing body of the community.

Session 5 Quantitative Indicators

	Indicator	**Data: FCS started on 1989.10.27**	
		Before JICA	**-- After JICA**
1	Number of annual general meetings held	204	08
2	Number of working committee meetings.(WCM)	208	12
3	Total number of members	180	340
4	Percentage of participation in the annual general/WCM's	100%	80%
5	TotalNumber of loans issued	116	200
6	Total savings Rs:	500000	7000000
7	Total amount disbursed per Month Rs:	200000	400000
8	Loan recovery rate	80%	100%
9	Out standing loans	Nil	Nil
10	Credit released to start enterprises.	70%	Not started
11	Membership fee/Share	Rs:15/ Rs:10	100/500
12	Purpose of loan	Boat repair, Purchasing of Net, Miscellaneous.	
13			
14			
15			

No:	**Name**
1	Mr. Y.G. Sunil Shantha
2	Mr. Punchisino Hettihewa
3	Mr. A.P. Chithirapala
4	Mr. B.K.H. Jayathilaka
5	Mr. M.M. Nimal
6	Ms. M.P. Ranjani
7	Ms.K.H. Nalani
8	Ms. Sasika Chaturani
9	Mr. K.H. Chandrasena
10	Mr. Pradeep Priyantha

PART 5-3 Dodanpahala Fishery Cooperative Society
Venue: In the garden of FCS President House
Date: 15.December.2005 at 2 p.m.

Session 1 Assistance offered to the Society (except JICA Pilot Project)

Dodanpahala FCS.

	Supporter	Contents of Assistance
1	Divisional secretary & Grama Niladari	• Provide Rs. 5,000 per month as livng expenss. • Provide Vouchers for nets - Rs. 10,000, 20,000, 30,000 • Provide rations • Provide protection • Provide Rs 30,000 Diesel relief assistance. • Provide medical facilities • Give loans for low interest rates • Give grace period to recover the loans • Clean of environment
2	Fishery Dept.	• Provide Fiber to repair damage boats. • Provide Vouchers to replace damage nets - Rs. 10,000, 20,000, 30,000
3	Temple	• Provide rations • Provide land to build shelters. • Constructed transitional shelters.
4	Red Cross	• Food Rations • Mosquito nets • Clothes • Kitchen Utensils • Temporary Tents
5	Save the Children	• School equipments • Dry ration
6	World Vision	• Canoes and Fishing nets • Carpentry tool kit • Masonry tool kit • FRP Boats
7	Oxfarm	• Money for making rope machines • Toilet facilities
8	FAO	• 15 Horse Power Engine • Nets for small scale
9	GOAL	• Repairing Boats • Provide Nets • Providing Transport Cost for boats
10	Small Fisheries Union	• Provide Nets and boats • Provide engine equipments • Provide Living Expenses - Rs. 1,000/head

	Supporter	Contents of Assistance
11	Southern Fisheries Organization	• Repairing canoes • Provide rope machines • Kitchen utensils • School equipments • Dry rations • Consultancy service for mental trauma

Session 2 Assistance of JICA Pilot Project

1	Concerning Social Capital	• Link the fisheries Society together and introduce other FCS • Make connection with other societies as multy purpose cooperative societies • Provide necessary ideas to work as a community • Improve the capacity and ability to work as a group • Taught how to work according to the community needs
2	Concerning Human Capital	• Give business plan preparation training • Support to improve managerial skills • Training on disaster management and how to behave as a community in a disaster • Increase the number of members in the society and their unity • Gave guidance to encourage the inactive members
3	Concerning Financial Capital	• Make arrangements to get loans through UNDP • Increase Essential savings • Assistance on hoe to handle loan correctly
4	Concerning Physical Capital	• Construct locker building • Construct Bank building • Propose to construct community building hall • Assist to get a Freezer truck from UNDP needed guidance were given and built up the linkages with UNDP Officers. • Happy about the work JICA has done in order to get the equipments to the bank building

Session 3

Questions on FCS's capacity and assets before and after JICA's assistance

3-1 Institutional Capacity

	Evaluation Item	Score	Comments
1	Understanding Community needs	B	Some Improvement As a result of a JICA involvement their identification of needs have increased. Ex. Constructing of new road to Pansalhene watta, Promoting savings to the children – organize a prize giving to the saving account holding children
2	Fairness of Management	B	Some Improvement Society members can discuss any question with the director board in a friendly manner and come to the most suitable decision

	Evaluation Item	Score	Comments
3	Trust among members	B	Some Improvement The members have kept a good faith to the director board in recovering the loans
4	Internal spontaneous mutual help	B	Some Improvement Work hard in a funeral of a village man or a priest or any person, In an accident of a child in their village they have work and help hard
5	Involvements of members	B	Some Improvement Convince visitors (JICA members) by the members regarding the need of a community hall. Give free labour in an event of Shramadana To get a fishing harbour to their village the society has requested to the Ministry of Fisheries and relevant organizations, As a result it has come to successful.
6	Information Access	A	Significant Improvement They have relationship with most governmental organizations and other institutes. ex. Coastal conservation, Dep. Of Fisheries, Local authorities, Cooperative Department.
7	Negotiations with External Organizations	A	Significant Improvement
8	Cooperate with other FCS Societies	A	Significant Improvement Before JICA involvements they only new the names of the societies in Matara. But now they know where those societies, their activities and who the members are. Ex. Relationship Epitamulla, Nonnawella FCS As a result of the study tour market linkage developed with kotapola Cooperatie..Eg Order on maldivefish and dry fish supplied to Kotapola society.
9	Contribution to External activities	D	Not much difference Help each other at a time of a funeral
10	Contribution of the society to the members	D	Not much difference Help society people to secure their engines by providing a loker building and rest room for the small fisherman Convince the members of their enterprise through business plan and educate them on how to improve their enterprise.
11	Contribution and attendance of the Governmental Officers and institutes	A	Significant Improvement Before Tsunami they didn't even know the governmental officers. Now they know who they are.
12	Members involvement in decision making	3	Not much difference Previously also they consider to the ideas of the members and gave priority to their ideas and requests. As usual they continue it.

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Business Plan preparation workshop	A	• Training a candidate on business plan preparation is very important than constructing lavatories • Giving ideas about how to improve the business through the prepared business plan
2	Need identification workshop	A	• Got an idea about new areas of income generation avenues. • Got an idea about new enterprises
3	JICA News letter	A	• Knowledge gained on Japanese experience
4	Disaster Management Workshop	A	• Educated about different Educated about how to behave in a time of disaster as a community. • kinds of disasters and the way they generate

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Assistance given to get UNDP loan	A	• Number of members improved • Savings improved • Share capital improved • Inquisitiveness of the inactive members to the society work was improved. • Ability to give higher scale loans to the members Ex. Rs. 50,000 • Ability to give loans for small scale entrepreneurs. • Number of loans can be given is increased. • Expectation to get a loan has improved.
2	Loan utilizing	A	• Knowledge gained on Maximum utilization of credit for enterprise. • Investing money in fixed deposit

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Constructing bank building	A	• Identity was built up to the society. So now they have the bargaining power with any organization. • Number of members increased • Savings improved • Share capitl improved • Boat owners have a chance to save their money. Because the bank is very near to the shore. So they have a chance of savings than previous. • A quick loan can be taken immediately. Eg: if a person wants to purchase a bulk fish then he can get a Quick loan from the bank.

	Evaluation Item	Score	Comments
2	Assets development	A	1.Involvement of the members in the association activities has been increased. Members come with new ideas.Proposel came up to construct new community Hall, obtaining state owned land. 2.JICA facilitate to get Freezer truck to the society. Society prepared their business plan and submitted to the UNDP. Potential to earn money to the society utilizing the truck.
3	OBM Locker	A	The society have some entrepreneurial idea. suggestion came up from the society to renting out the OBM locker and earn money to society. OBM is close to the shore and it save the handling time of the engines and equipments.

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

All fifteen members participated in the evaluation secession and unanimously agreed on the JICA method fallowed in the pilot project. The participants also described the reasons.

a. Comparing with post Tsunami activities carried out by the rest of the organizations, JICA methodology is completely different. The other stakeholders spend very limited time with the community and provided required materials.
b. JICA process is friendly, trustworthy, and sustainable approach.
c. The approach fallowed by JICA helps FCS reawakening
d. There was a remarkable contribution from the members to society activities.
e. Introducing of sustainable path, and new avenues, helped to expand the society activities.

Session 5 Quantitative Indicators

	Indicator	Before	After
1	Number of General meetings	96	08
2	Number of Working committee meetings	144	11
3	Number of members	30	93
4	Participation rate for general and working committee meetings	100%	75% (Most of the members are going in multy day boats. So they are unable to come when they have gone for fishing)
5	Amount of loans issued	250	290
6	Number of boats- OBM - Multy day	25 63	25 63
7	Fish catch - kg/month	Rs. 100,000	Rs. 100,000
8	Savings - Children - General saving - Compulsory saving - Shares		Rs. 6,000 Rs. 42,477 Rs. 292,374 Rs. 7,900
9	Activity of the working committee	Good	Very Good

	Indicator	Before	After
10	Membership fee Shares Savings	Rs. 25 Rs. 100 Rs. 100	Rs. 25 Rs. 100 Rs. 100
9	Loan recovery rate	98%	99%
10	Overdue loans	Nil	Nil
11	Purpose of loans	Coir industry, Maldive fish processing. Boat repairing.	Coir industry, Maldive fish making, Boat repair, Selling of diesel for boats.

No:	Name
1	Ms. Gaya Kumuduni
2	Ms. K.B. Sama
3	Ms. H.A.P. Lalitha Ranjani
4	Ms. B. Nilawera
5	Ms. K.H. Mangalika
6	Ms.L.B. Deepani Priyadarsani
7	Mr. L.B. Petra Silva
8	Mr. H.W. Chaminda
9	Mr. A.W.M . Mahesh
10	Mr. H.W.Ranjeen
11	Mr. A.T. Ganasiri
12	Ms. Dalsi Priyanka
13	Mr. P.T. Sarath
14	Mr. A.T. Sameera
15	Mr. S.H. Gamini
16	Mr. R.P. Nandasiri

ANNEX 5-8 Memorandum of Understanding for FCS Pilot Project

Recovery, Rehabilitation and Development Project
for TSUNAMI Affected Area
of Southern Region of Sri Lanka

Matara Main Office
37, New Tangalle Rd., Kotuwegoda, Matara
Telephone: 077-697-8709
e-mail: sakamoto@padeco.co.jp

Colombo Satellite Office
No.19 Hedges Court, Colombo 10
Telephone: 077-9052609
e-mail: iwami@star.odn.ne.jp

27th July 2005

Memorandum of Understanding

The Department of Fisheries & Aquatic resources, Provincial commissioner of Co-operatives in Southern Province, and JICA Study Team have discussed and reached an agreement for the implementation of the Pilot Project to support fishery Cooperative in Matara District. These three organizations will take necessary action for the execution of this pilot project.

Following document is attached,

- Summary Plan of Fishery Cooperatives Support Pilot Project

Mr. G PIYASENA
Director General
Department of Fisheries & Aquatic resources
Ministry of Fisheries & Aquatic resources

Ms. P.M Thilaka KALYANI
Provincial commissioner of Co-operatives in Southern Province

Mr. Yuichiro MOTOMURA
Leader
JICA Project Team

Summary of the pilot project plan

Terms of Reference for the Pilot Project
for Recovery, Rehabilitation and Development Project for Tsunami Affected Area of Southern Region in the Democratic Socialist Republic of Sri Lanka

1 Selection of Pilot Project

Implementation of pilot project as a part of this JICA Project has been agreed upon by the two governments at the initial stage. However, there are some roles to be fulfilled as well as some conditions to be satisfied by the pilot project.

1.1 Role of Pilot Project

The JICA Project Team will conduct the pilot project for the following reasons:

- To demonstrate some parts of the rehabilitation plan;
- To support the tsunami-affected people in less addressed topics and areas;
- To propose alternative ways of supporting rehabilitation; and
- To enhance social capacities to carry out actions, based on the strategies proposed.

1.2 Constraints and Strategic Criteria for Selection

Some conditions exist that prospective pilot project must satisfy.

(1) Time Frame

Pilot project should produce impacts by February 2006. This project is expected to terminate in March 2006. Therefore, support of the Project Team should also be completed within this timeframe. Pilot project are expected to generate significant benefits on prospective beneficiaries very soon.

(2) Pilot project should not support individuals impacted by the tsunami

The JICA Project is not in a position to directly compensate for damage to private property from the tsunami. Hence, the pilot project should not include any activities that deliver money, equipment, and/or property to individuals or private companies.

(3) Cost-effective Project Impacts

The JICA Project is considered as a Development Study, based on JICA definitions. A pilot project shall be first implemented on a small scale, to prove the assumptions that the Study Team puts forward. Compared with other schemes, such as grant and loan programs, the

Development Study can allocate very limited amounts of money for the pilot project. At the same time, however, pilot project should contribute to those in need as much as possible. As such, cost effectiveness of the activities is a high priority.

(4) Duplicability

Pilot project are expected to be of good practice, meaning that they can be easily duplicated and/or extended to other areas of the tsunami-affected communities. Since the pilot project can assist only a limited segment of the overall tsunami-affected communities and the JICA Project Team cannot handle the extension of such works, the pilot project concepts must be easy to understand, to copy, and to apply.

(5) Sustainability

Even though the JICA Project Team can support the pilot project for a short period, the activities and impacts will continue, even after the culmination of related activities for the JICA Project. In this regard, supports from the JICA side should be focused on institutional and/or human resource development, rather than the simple delivery of money and items/equipment.

1.3 Verification of the Pilot Project

The JICA Project Team will implement pilot project in order to verify assumptions proposed by the three-level assistance model described in Chapter 2. The Project Team will take Japanese experiences into consideration and propose rehabilitation approaches including:

- Facilitation of initiatives by tsunami-affected peoples' associations (Community Based Organization/ CBOs) in the rehabilitation process;
- Enhancement of local public administration; and
- Collaboration between CBOs and public organizations.

However, these aspects are nothing more than assumptions that have yet to be demonstrated as valid in Sri Lanka. As such, verification is the primary objective for pilot project implementation. Verification mentioned in Subsection 2.3.4 will be conducted through the following three stages.

(1) Appraisal at the Preparation Stage

Even before commencement, pilot project should be examined from various points of view. For example, CBOs are a very important topic. For instance, what is the legal status of and registration procedures for CBOs? What is the manner in which they work and also can CBOs obtain legal status to collaborate with government organizations?

(2) Monitoring at the Executing Stage

A participatory evaluation session for each pilot project will be conducted periodically, to gauge performance and effectiveness. The evaluation criteria include pilot project verification, relevance, effectiveness, efficiency, impact, and sustainability. These criteria are proposed by the DAC of OECD and are commonly employed in assessment of JICA projects.

(3) Evaluation during the Follow-up Stage

Some of the verification work (i.e., sustainability) cannot be conducted during the initial stage of the pilot project. As such, measures such as effectiveness and sustainability of pilot project will be assessed later. Lessons learned from these follow-up exercises can prove effective in improving project for other rehabilitation projects in the future.

2 Plan of "Fishery Cooperatives Society Support Pilot Project"

(1) Project Title ：Affected Fishery Cooperatives Society Support Pilot Project

(2) Location ： Epitamulla, Noonnawella and Dodampahala cooperative societies in Matara Province

(3) Counterpart Organization
：Fisheries District Office and Cooperative District Office

(4) Beneficiaries ：Fishery cooperative society and its members

(5) Project duration ：July 2005 to February 2006

(6) Background

Among fishermen in Matara Prefecture, 378 were killed and 23 were deemed as missing after the tsunami disaster in December 2004. For houses within 100m of the shoreline, 698 houses were lost. Fishing related equipment sustained tremendous damage. According to the surveys, 35 multi-day boats, 78 one-day boat, 94 ORU (with engine), and 366 traditional ORU were badly damaged in Matara.

However, soon after the tsunami hit the area, several rehabilitation projects were launched by NGOs. As five months have passed since the tsunami, repairs of small boats will be finished soon. Rehabilitation scheme for fishing equipment will continue by NGOs and CEY-NOR, although the focus will be upon the repair of larger fishing boats and out-board engines.After the tsunami, the government's assistance policy was revised. According to the new policy, houses must be reconstructed outside the buffer zone (a 100 m inland

distance from the mean high water line). In fact, the new policy has troubled fishermen as their means of making a living in the new residential sites will be inconvenienced. At the new housing site, everything is located away at some distance, with problems existing for children's school, harbor access, and fishing equipment storage (i.e, engines). Occasionally, engines are separated from OBM style boats after the daily work to prevent theft.

Furthermore, the tsunami destroyed the office building of the Fisheries Cooperative Society (FCS), which supported local fishermen with funding and a banking system. The fish marketing hall (the auction hall), which functions as the center for management and operations, was badly damaged by the tsunami, resulting in difficulties for fish marketing and related activities of FCS.

Many of donor organizations and NGOs have made efforts to rehabilitate fishery harbors and provide fishing equipments and gears. Meanwhile, support to FCS has been disregarded. FCS plays a central roll vis-à-vis rural banking in Sri Lanka. It is now essential for fishermen to obtain some funds for self-help for revitalization after the disaster. Due to the tsunami, the FCS office building was wiped out and is incapable of continuing its banking and loaning operations.

Due to damage to the fish-marketing hall, catch-products are sold in the open field and/or in temporary shelters that can contaminate and spoil the products, which are inappropriate for distribution. It is crucial to make best efforts to decrease losses in the catch since the number of fishing vessels has decreased, as has the size of the catches. It is essential to maintain maximum product freshness when distributing them, which is important to maintain stable seafood supplies.

(7) Project Goal

The lives of fishermen are reestablished at the community level with support to the FCS.

(8) Project Components

- Increase knowledge and facilitate capacity building in FCS related activities
- Conduct open seminars related to the handling of fish products under sanitary conditions
- Construct an out-board engine locker, auction hall, and FCS office building

(9) Implementing Organization Structure (including roles of the Project Team)

This project will be implemented in partnership with the Matara District Office of MOFAR and Ministry of Cooperative, respectively. The District Cooperation Council of Matara has

positioned one cooperative inspector for each sector. In the fisheries sector, one full-time officer is responsible for FCSs in Matara and conducts inspect tours of all FCSs every month for administrative training. In this pilot project, the targets are facilities affected by the tsunami for rehabilitation and fishermen relocated inland, who are having troubles continuing work as fishermen. Management seminars will be held to select FCSs communities, fisheries inspectors, and cooperative inspectors. Through inspect participation, other FCSs can also be instructed for further capacity building. This pilot project (management system) will seek to improve FCSs as well as the living conditions of members.

The FCSs concerned are selected from the registered FCS list in Matara. First of all, 10 FCS will be selected by the cooperative inspector in charge of the 27 officially registered FCSs. Then, detailed surveys will be done at 10 selected FCSs by the JICA Project Team. Through this evaluation of FCS activities and the damage to the community, those sustaining serious damage and work properly will be selected. The location map of the three selected FCS is presented in Figure 1. A design of the outboard motor locker is shown in Figure 2.

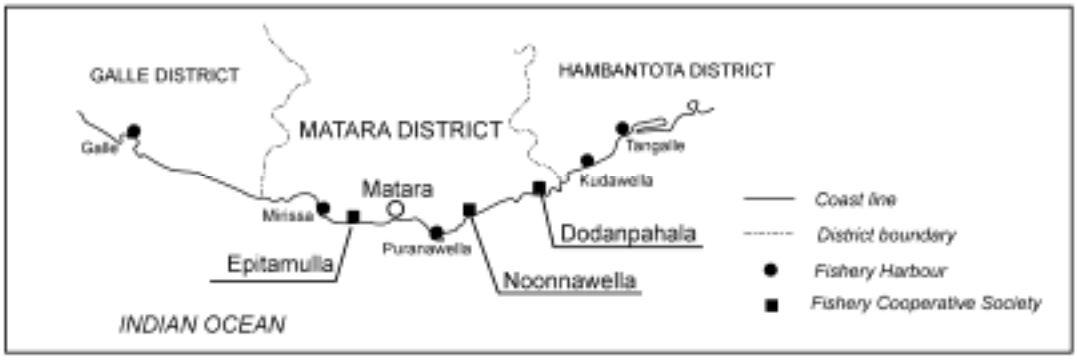


Figure 1 Three Selected Fishery Cooperative Societies

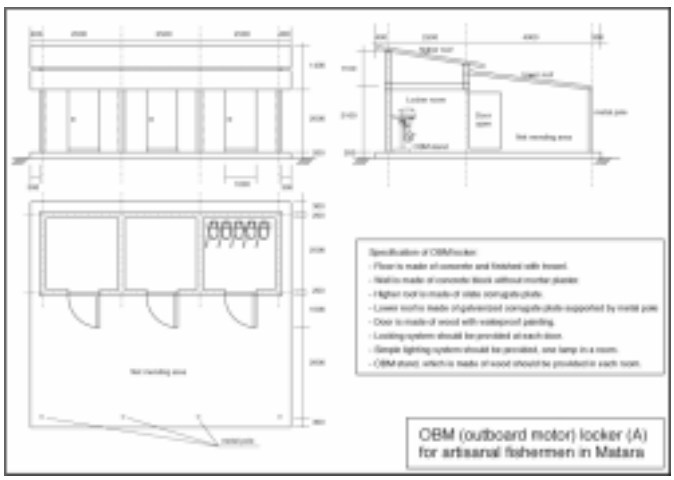


Figure 2 Outboard Motor Locker

(10) Tasks of the Pilot Project

The tasks are shown in Table 1.

Table 1 Tasks of the Fishery Cooperatives Support Pilot Project

Tasks
Seminar or workshop on FCS activities
Seminar or workshop on the hygienic handling of fish
Construction of OBM locker and rehabilitation of bank office at Epitamulla
Construction of OBM locker and rehabilitation of auction hall at Noonnawella
Construction of OBM locker and rehabilitation of bank office at Dodampahala
Equipment for fish marketing at auction hall
Monitoring and evaluation of the project

(11) Use of Outside Contractor

Berendina, a local NGO, contracts the implementation of this pilot project.

(12) Relationship to Other Japanese Assistance

Most fisheries equipment that is provided by non-project-type grants was given to individual fishermen and not to FCS. Although the rehabilitation of the Tangalle and Galle Fishery Harbors are also to be conducted under the same non-project-type grant scheme, no plans exist to support the fisheries communities. Once fisheries equipment provided from Japan arrives in the hands of the fishermen, FCS fishermen can effectively utilize the cooperative facilities proposed in this project.

(13) Applicability of Japanese Expertise and Experience

The fisheries association in Japan is responsible for a variety of activities, such as the financing (banking) systems for society members, loans, mutual funds, fisheries gear procurement, common fish retailer shops, cooperative management of facility building, fisheries education/training, and social activities. This cooperative system is developed in Japan and is useful for managing small fisheries communities. The technical know-how of the Japanese FSC system has been studied and distributed widely throughout Southeast Asia. It is certain that the Sri Lankan fisheries sectors will find an interest in it. At the moment, Sri Lanka's FSC has only two functions, saving and loaning. Through management experiments of common outboard engine lockers, the organization can learn about "common management".

Fishermen use the auction halls as face-to-face trading zones presently. If FCS authorizes consignment to members for trading fish, the society will earn extra profits by negotiating with wholesalers/retailers. At the same time, daily data can be collected for statistical assessment in the future. In Japan, this data is used for sustainable natural resource management. As mentioned above, the technical transfer of knowledge related to the Japanese fisheries cooperation system will be a useful tool and can be utilized for sustainable fishing in community-based fisheries in Sri Lanka.

(14) Sustainability and Expandability

In this project, we have selected three FCSs located in the Matara Prefecture. Those FCSs have good management background. It is certain that each FCS will effectively operate these facilities after project completion. Capacity building procedure will also be transferred to other FCSs from the cooperative inspector and members of FCS.

(15) Environmental Impact

No additional environmental restrictions concerning the rebuilding of the auction hall and the FCS office building exist, since the project objective is principally to restore the facilities to pre-tsunami state. In actuality, the provision of the auction hall can decrease the unnecessary waste of fish and increase the value of products due to their handling in cleaner environments. One common practice among southern Sri Lankan fishermen is to remove their boat engines and keep them in the owner's house for security purposes after every work day. Under such circumstances, however, any fuel leakage occurring can cause negative environmental impacts. As such, by constructing engine storage lockers near the landing sites, fuel tanks and engines can be collected and stored in a single place, making risk management easier and concentrated on a single site.

(16) Related Activities of Other Donors

Fishery vessel repairs were conducted by several NGOs including GOAL (Ireland), the Belgium Army (Belgium), and CARITAS (a Christian NGO).
Secours Populaire Français (France) provides bicycles and motorbikes, as well as insulated boxes to store fish for small scaled fisheries distributors.
Japan, various international donors, and NGOs providing and repair fishing gear, fishing boats, as well as boat engines.
The People's Republic of China and the United States of America are rehabilitating fishery harbors, with Mirissa and Puranawella Harbors in Matara Prefecture on the list.

3 Implementation of Pilot Project

3.1 Structure and arrangement for Pilot Project

In order to satisfy all the conditions, the JICA Project Team has the following objectives in order to achieve sustainability, beneficial impacts, effectiveness, and efficiency:

- Each project will have a partnership with one or more public institutes;
- Each pilot project will facilitate its beneficiaries to formulate associations of tsunami-affected people (i.e., traditional, refugee, and business communities) for mutual help;
- A Sri Lankan NGO will execute the pilot project to carefully facilitate socio-economic development of the beneficiaries; and
- The steering committee of each pilot project will include members that represent the beneficiaries, public administrators, the managing local NGO, and the JICA Project Team.

Figure 3 shows the implementing structure for pilot project. The implementing structure based on this concept, will be formulated for each pilot project.

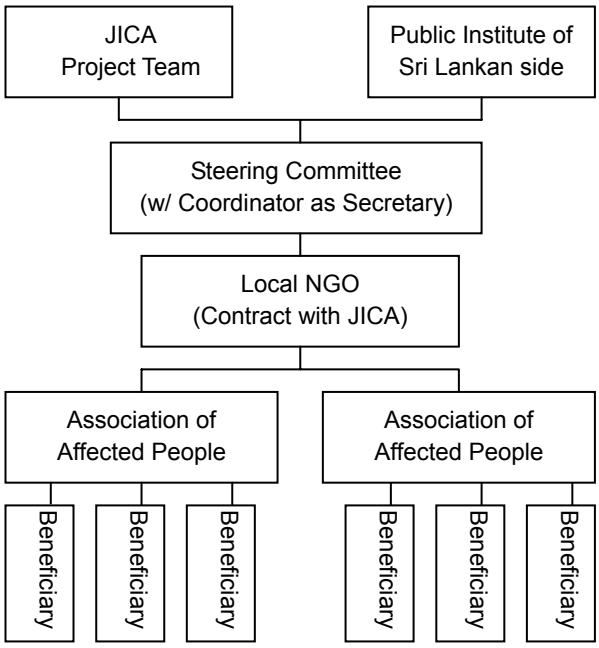


Figure 3 Organizational Structure of Pilot Project Implementation

3.2 Implementation Schedule

Table 2 shows schedule of pilot project implementation.

Table 2 Implementation Schedule of the Pilot Project

Month (June 2005-March 2006)	6	7	8	9	10	11	12	1	2	3
Project Stages		Preparation		Implementation					Succession	
Contract with Local NGO		Contract							Termination	
Events		Start					Evaluation		Hand-over	
Steering Committee		△	△	△	△	△	△	△		

3.3 Follow-up for Pilot Project

(1) Pilot Project Structure after Culmination of the JICA Project

Pilot project take a social-development approach rather than the simple delivery of cash and goods, facilitating capacity building of beneficiary and government organizations. Even after the end of the JICA Project, project activities will remain under the structure shown in Figure 4.

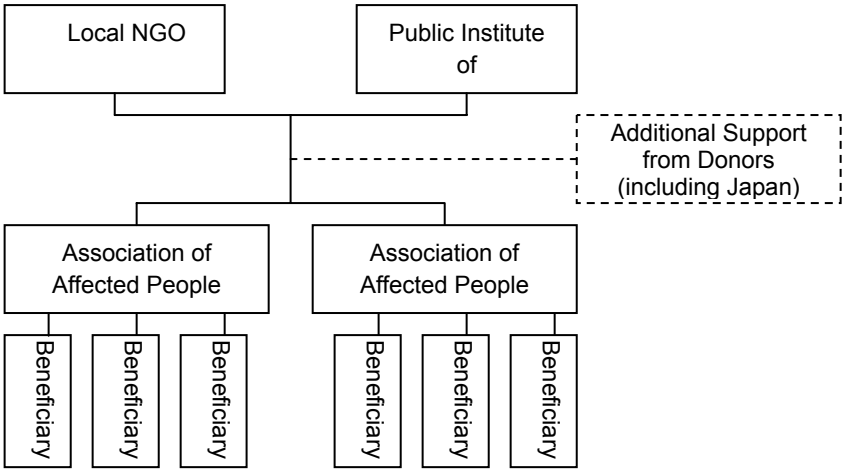


Figure 4 Pilot Project Structure after March 2006

(2) Follow-up Support

Realistic follow-up scheme should be adapted for sustainable development of the tsunami-affected communities through continuation of the pilot project. This support for the pilot project from the Japanese side could be executed through the following schemes noted below:

- Extending the NGO contract by the JICA Sri Lanka office;
- Conducting technical transfer by the JICA Technical Project, volunteer(s), or expert(s);
- Granting of tsunami relief soft loans by the Japan Bank for International Cooperation (JBIC); and
- Conducting a grass-root grant program by the Japanese Embassy.

ANNEX 6-1A Questionnaire Format of an Interview Survey on Required Equipment for Food Base Industry Association Members

Ref No: ……

Estimate of Businessmen affected by Tsunami
JICA Project

1. Name :…….....
2. Address : …….
3. Telephone :……. Mobile : …….
4. Nature of your business :…….……
5. Year you started your business :……..……
6. Is your business registered: Yes / No
7. Presence of certifications for your business:

Certificate	Yes	No
Gramasevaka's certification		
Samurdhi Niyamaka's certification		
Police Report		
Other		

8. Action taken after the tsunami:

Action Taken	Yes	No	Date
Inform the Grama Sewaka			
Inform the Police			
Inform the Registered institute			
Inform the Related institute			
Inform the NGO's			
Inform JICA			
Inform AGA			
Inform the institute which collects information.			
Other			

9. Monthly income before tsunami:

Rs.5,000 - 10,000		Rs.10,000 - 20,000		Over Rs.20,000	

10. Number of Employees before tsunami:

11. Will you restart your business? Yes / No

12. If Yes, monthly income after tsunami:

Rs.5,000 - 10,000		Rs.10,000 - 20,000		Over Rs.20,000	

13. Number of Employees after tsunami

14. Equipment or utensils you already have:

Item	Yes	No	Value in Rs.	Source
Mixture				
Iron Plate				
Bread Mould				
Other				
Other				
Other				

15. Equipment or utensils you need to restart your business:

Item	Yes	No	Value in Rs.	Priority
Mixture				
Iron Plate				
Bread Mould				
Other				
Other				
Other				

16. Do you need working capital? Yes / No

17. If yes, are you willing to take out a loan with a low interest rate? Yes / No

18. Do you have any other methods to find working capital?

ANNEX 6-1B Questionnaire Format of an Interview Survey on Required Equipment for Ornamental Fish Industry Association Members

Ref No: ……

Estimation of Equipment Needed for Lung Divers, Suppliers and Inland Fisheries affected by Tsunami JICA Project

1. Name :……..……
2. Address : ……
3. Telephone :…… Mobile : ……
4. Nature of Job:……..……
5. Were you affected by the tsunami : Yes / No
6. Presence of Police Report (Should be before 31st of Jan 2005): Yes / No
7. Presence of Diving certificate: Yes / No
8. If Yes, Date of certification:
9. If No, have you applied? Yes / No
10. If candidate is the supplier, please mention whether you have a business registration: Yes / No
11. If Yes, Date registered: Re.No:……..…
12. Monthly income before tsunami: Rs.……
13. Do you plan to restart your business? Yes / No
14. If Yes, Monthly income after the tsunami: Rs……...…….

15. Details about equipment.

Equipment	Have	Need	Value Rs.	Priority	Source
Diving Fins (Mention size)					
Diving Mask					
Diving Tank					
Diving Torch					
Life Jacket					
Harness					
Wet suite					
Regulator (pressure/depth)					
G. P. S					

16. What do you need from JICA?

Equipment	Quantity	Value in Rs.	Priority

17. Are you willing to take out a low interest loan as working capital? Yes / No Amount:

Signature of Applicant
Date

ANNEX 6-2 Summary of the Survey Result on the Ornamental Fish Industry

JICA Project Team has made the following list of required equipment after conducting a thorough interview survey of its association members.

Item	Quantity	Item	Quantity
Diving Fins	49	Tank Valve	38
Diving Masks	16	Oxygen Tank	1
Diving Tank	17	Fishing Nets	2
Diving Torch	52	Cement Pack	30
Life Jacket	11	Air Pump	29
Harness	73	Breathing pairs	10
Wet suite	3	Concrete Cubs	1
Regulator in full	72	Submersible Water Pump	2
Regulator	1	Water Hose	1
Pressure / depth gauge	12	Silicon Gum Tubes	10
Regulator Hose	3	Silicon Gum Gun	1
Depth gauge	1	Glass Pieces	100
G. P. S.	10	P.V.C. Pipe	1
Diving Knife	1		

ANNEX 6-3 Summery of the Survey Results on the Food Base Industry

JICA Project Team has made the following list of required equipment after conducting a thorough interview survey of its association members.

Name of the Equipment	# Units	Name of the Equipment	# Units
40 Bread Oven	1	Plastic Box	5
50Kg Bakery Mixture	6	Plastic bucket (15L)	4
Air compressor	1	Polythene Sealer	3
Aluminum plate	13	Polythene Sealer (8")	1
Bicycle	8	Polythene Sealer(10")	1
Big kerosene cooker	1	Polythene Sealer(12")	3
Big Pan (20kg)	6	Porcelain Plate	100
Bitter	4	Refrigerator	4
Blender	1	Regiform Box	15
Blow Lamp	1	Scale (Electric)	1
Drill Machine	1	Scale (Normal)	6
Electric Oven	6	Sesame Cleaning Machine	1
Gas Burner (One)	5	Sesame Product Machine	3
Gas Burner (Three)	1	Spoons	4
Gas Burner (Two)	1	String hopper Steamer	7
Gas Cooker	1	String hopper Tool	8
Gas Cooker + Cylinder	17	String Plate	740
Gas Cylinder	2	Thermometer	2
Gas Cylinder(32kg)	2	Murukku Making Tool	1
Grinder For Salt Making	1	Nossel Set	1
Grinder	1	Oil pan	6
Grinding Mill	2	Oil pan (3kg)	7
Hand Grinder	1	Pan (05kg)	9
Incubator	4	Pan (10kg)	5
Iodine Mixing Machine	1	Pan (15kg)	3
Knife	1	Pan (3kg)	4
Knife Set	1	Pan (4kg)	1
Mixing Pan	5	Plastic Bucket (Big)	2
Motor & Pestle	1		

ANNEX 6-4 Activity Records

(Original Record)

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP
Title : Ceremony of Symbolic Handing over of Diving Equipment					

Location : **New Hemali Reception hall in Walgama Matara**

Date : **21st.10.2005**

Beneficiaries : **Lung divers - 81, Skin divers - 85, Inland fisheries - 04, Suppliers - 16**

Participants : **Mr. Kelum, the Compeer of the occasion was Priyantha Abeygunawardana Chairman, Diving association**

Speakers at the ceremony were Mr. Sumanadasa, The Deputy Director of the Industrial Development Board , Matara.

Mr. D.P. Wicramasinghe, The Conultant , JICA.

Mr. W.Ubeysirinarayana, Tsunami Relief Manager of Berendina Foundation.

Mr. G. Mamnamperi, the Assistant Commisioner Cooperatives Matara

Mr. Sakamoto, the deputy team Leader, JICA of Matara office

Mr Dhammika the secretary of the society delivered the Vote of thanks

- **Objectives and aims**

To enhance the opportunities of livelihood and establish an association to enhance co-assistance among the divers engaged in collection of ornamental fish.

One of the 3 pilot projects is rehabilitation of the Tsunami- affected micro industries. There are 3 main activities under this and one of them is helping the affected persons in the industry of Ornamental fishing, namely Lung divers, skin divers, inland fisheries persons and suppliers**.** Except skin divers who will be supported with the money subject to maximum of Rs. 7,000 coming from Berendina, All the others will be rehabilitated by JICA subject to maximum of Rs.30,000.

Having carried out a survey to screen the Tsunami- affected genuine ornamental fishing divers and suppliers with the support of the government and other agencies concerned, a list was prepared. An association was formed and a working committee established to facilitate JICA efforts in rehabilitating the target group.

- Renting of necessary equipment and tools for business operations through the association.
- To Provide technical and management advice.

- **Activity/proceedings**

Having obtained a part of the consignment, the handing over ceremony was fixed at 10.00 a.m. on the 21st of Oct 2005. This was held at New Hemali Hall, Walgama with Mr. Sakamoto as the Chief Guest. Only **25** persons out of 125 persons present, were lended equipments symbolically. Acting upon a decision taken at a steering committee meeting held on a previous date at the JICA office, all the details including the ID numbers of the members attended were collected as well as the member fees as a way of strengthening their association.

One MOU between JICA agreeing to provide financial and another supports to rehabilitate the affected and IDB agreeing to provide technical support on one side and the society as the second partner was signed. Another MOU between the association and each and every beneficiary was signed the very same day the items were lended. This was done as a means of renting out the equipment the ownership is in the hands of the society. The funding to support the skin divers comes from **Berendina Foundation**. Equipment to the value of Rs. 3.3 million was lended.

The invited guests at diving equipment handing over ceremony

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP
Title : Handing over of Equipment to Tsunami affected Food Industry entrepreneurs					

Location : **Hemali reception hall in Walgama Matara**

Date : **26th August 2005**

Beneficiaries : **Equipment to 42 members out of 48 members were**

Participants : **Mr. Imoto, The acting head of the JICA team of Matara office.**

Mr. Wckramasinghe, The JICA consultant

Mr. Sumanadasa, The Deputy Director of IDB

Mr. Sathya De Silva, the Director General of the Southern Development Authority

Mr. Ubeysirinarayana, Tsunami Relief Manager, Berendina Development Services.

Mr. Wasantha, of IOM, Matara

Mr. Kelum Nishantha, Project Coordinator of JICA.

Ms. Deepika, Project Coordinator, JICA.

Ms. Shyamali Jayalath, Project Coordinator, JICA

- **The Objective and aims**

One of the objectives of the asset replacement to the tsunami Affected Small and Medium level Entrepreneurs persons help recover from the effects of the disaster.
The other one was to rehabilitate the disaster stricken food industry through asset replacement.

- **Activity / Proceedings**

One MOU between JICA agreeing to provide financial and another supports to rehabilitate the affected and Industrial Development Board agreeing to provide technical support on one side and the society as the second partner was signed. A second MOU between the association and each beneficiary. This was signed the very same day the items were lended on the 26th of August 2005. This was done as a means of renting out the equipment making sure that the ownership of the items will be in the hands of the association. Handing over of equipment to Tsunami affected food industry entrepreneurs to the tune of Rs. 2.3 million. Gas cookers, gas cylinders, cake mixtures, blenders, electric ovens, cooking pots & pans, push cycles for delivery etc. were lended.

Mr.Ishimoto and other invited guests lighting the traditional oil lamp

Mr.Imoto handing over a Refrigerator to food society secretary

RECORD OF PILOT PROJECT (PP) ACTIVITIES					
	Refugee Camp PP	X	Small Industry PP		Fishery Corporation PP

Title : Exhibition of Food Items

Location : **Solis reception hall at Nupe Matara**

Date : **13th October 2005**

Beneficiaries : **All the 48 members of the Food Entrepreneurs Society and some new members**

Participants **Mrs. Athukorala, Divisional Secretary, Matara.**

Mr. K. Gunawardana of Lucky Yoghurt on entrepreneurship

Mr. Chopa Edirisinghe of ITDG on the technical support.

Mr. Vijitha, the Public Health Inspector of the Matara Muncipal Council on the hygienic aspect of food production

Mr. J. Basnayake of Cathey Reech institute Embilipitiya on the Technical aspect

Mrs. K.Hettiarachchi, the food technologist on the quality of food products

- **Objectives and aims**

Having been lended equipment are necessary to continue the food processing business as replacement of assts to entrepreneurs affected by the Tsunami under the pilot project, they were asked to show their potential to lure patrons and promote market linkage. As a result, the exhibition was arranged:
To develop market linkage;
To give more attraction to products;
Arrange opportunities to develop products;
Exchange ideas and familiarization among members; and
To meet service providers and develop linkages to obtain their services.

- **Activity/ proceedings**

As was discussed at length the Food Society members and the JICA team worked hard and made necessary preparations at the venue and as was arranged the exhibition was held on the 13th Oct. with the participation of The JICA team headed by Mr. Sakamoto. The team also comprised Mr Wickramasinghe, the Consultant, JICA and 3 coordinators including the officer who handles the subject matter, Mr. Kelum and the Berendina Manager. The following actions were taken to give publicity to the event:

An invitation letter to the chief guests and the other invitees as resource persons / evaluators;
Distribution of a leaflet along with one of the leading daily Sinhala newspapers;
Information as a news item to news papers Daiy News and other Sinhala medium dailies;
An item included in the Ruhunu Sevaya Radio news; and
Exhibiting a banner at Nupe Junction.

The items exhibited were:
Bakery products like bread, buns and pastries;
Hoppers, string hoppers;
Sweet meats like Milk toffees, Dodol, Kewum, Aasmi, Helapa, sesame rolls and musket Cakes;
Maldive fish;
Yoghurt;
Table salt;
Curry powder; and
Tea packets.

After the exhibition was declared open and the speeches delivered, evaluation formats were distributed among the evaluators. The evaluators were the Lucky Yoghurt Proprietor, Mr. Keerthi Goonawardana, Mr. Chopa Edirisinghe of ITDG, Mr Sumandasa and a food technologist of IDB, officers of the Chamber of Commerce, M Mr. Vijitha, the Public Health Inspector of the Matara Municipality.
Evaluation session was culminated with an open forum where the all the evaluators food society members that took part in the exhibition and the JICA team and the Berendina Manager took part. Exchange of views and ideas took place during the session. The exhibition was held from 10.00 a.m. to 1.00 p.m. ending up with a lunch for all invitees, the food society members that took part in the exhibition and the other participants.

The quality of the product is being inquired about by one of the evaluators

The Divisional secretary of Matara Ms. Atukorala addressing the gathering

ANNEX 6-5 Minutes of the Steering Committee Meetings of the Small Scale Industry Support Pilot Project

(Original Record)

Minutes of the 1st Steering Committee Meeting of the Small Scale Industry Support Pilot Project

July 04, 2005

Secretary: Mr. Kelum Nishantha Wadumesthrige.

Absent: Mr. Jagath Godakanda Director Berendina.
Mr. H. N. Sunanda Chairman Food Base Industries.

Present : Mr. S. H. Sumanadasa Deputy Director- IDB, Provincial Office Matara.
Mr. Hideo Sakamoto - JICA Project Team.
Mr. D. P. Wickramasinghe - JICA Project Team.
Mr. Kelum Nishantha Wadumesthrige - JICA Project Team.
Mr. T. N. Hettiarachchi - Secretary Food Base Industries.
Mr. Priyantha Abegunarathna - Chairman Ornamental Fish Industries.
Mr. M. M. Dammika - Secretary Ornamental Fish Industries.
Mr. Laxshman Thennakoon - Vice President of Ornamental Fish Industries.
Mr. Tony Pearson - Chairman Motor Vehicle Repair Industries.
Mr. V. G. A. Asoka - Secretary Motor Vehicle Repair Industries.

- First Steering Committee meeting of the Small Scale Industry Support Pilot Project was called to order at 10.30 a.m. in the JICA - Matara office by Mr. Hideo Sakamoto. Mr. Hideo Sakamoto gave welcome address.
- Self-Introduction by each member.
- Mr. Hideo Sakamoto explained about the Institution (JICA) and its roles and activities in this project. In his speech he briefly explained about three pilot projects, time schedule, and present progress of the project. And he also explained sustainability of the project after JICA's leaving.
- Then Mr. Sakamoto spoke about Berendina Foundation as its partner organization. He said implementation of the project is done by Berendina Foundation and after the departure of JICA, Berendina Foundation will take over the project.
- Mr. Wickramasinghe explained about the structure, objectives and main function of the steering committee.

1. Structure of the Steering Committee
- President & Secretary from each association (06)
- Representative of Industrial Development Board (01)
- Representative of Berendina Foundation (02)
- JICA Team (03)

2. Objectives
- Coordinate overall development of TSUNAMI affected entrepreneurs through support to their Association.

3. Main Functions
- Take decisions related to the three Enterprises.
- Keep a close relationship with government, NGO's & other stakeholders
- Decision on financial matters.
- Dissemination of information and decisions taken by the steering committee.
- Identification of training needs; skill developments and workshops etc.
- Keep a close relationship with counterpart organization like Berendina Foundation & IDB.

4. Conduct monthly meetings
- Mr. Sakamoto spoke again and said there are two main tasks in this project as follows:
  - Supply some equipment through IDB; and
  - Enhance institutional power.

He also asked to association representatives to arrange the necessary workshops, seminars, trainings and field visits.
- Mr. Laxman thanked JICA for giving them such an opportunity and asked to provide proper training from Marine University in Tangalle.
- Mr. D. P. Wikramasinghe promised to discuss about micro credit with UNDP and EDSC.
- After the announcement to have a steering committee meeting in second week on the second Tuesday of every month, the next meeting was scheduled to take place on 09th August in 2005.
- After the vote of thanks by the Secretary, the meeting adjourned at 11.30 a.m.

Minutes of the 2nd Steering Committee Meeting of the Small Scale Industry Support Pilot Project

August 15, 2005

Secretary: Mr. Kelum Nishantha Wadumesthrige

Absent: Mr. Priyantha Abegunarathna - Chairman Ornamental Fish Industries.
Mr. M. M. Dammika - Secretary Ornamental Fish Industries.

Present : Mr. S. H. Sumanadasa Deputy Director- IDB, Provincial Office Matara
Mr.Yoshiya Nakagawa- JICA Project Team
Mr. D. P. Wickramasinghe - JICA Project Team
Mr. Kelum Nishantha Wadumesthrige - JICA Project Team
Mr. W. Ubayasiri Narayana - Manager Berendina
Mr. H. N. Sunanda Chairman Food Base Industries
Mr. T. N. Hettiarachchi - Secretary Food Base Industries
Mr.N. D. Jayaweera - Committee Member Food Base Industries
Mr. Laxshman Thennakoon - Vice President of Ornamental Fish Industries
Mr. Tony Pearson - Chairman Motor Vehicle Repair Industries
Mr. V. G. A. Asoka - Secretary Motor Vehicle Repair Industries

- Second Steering Committee meeting of the Small Scale Industry Support Pilot Project was called to order at 2.00 p.m. in the JICA - Matara office by Mr. Yoshiya Nakagawa. Mr. Yoshiya Nakagawa gave a welcome address.
- At the beginning of the meeting, Mr. Kelum Nishantha read the Minutes of the previous Steering Committee meeting. All members attended confirmed it.
- Mr. Yoshiya Nakagawa explained about the present progress of the project. In his speech he briefly mentioned that the beneficiary list of Food Base Industries and Ornamental Fish Industries is now finalized. And he also explained sustainability of the project after termination of the JICA Project.
- Then Mr. D.P. Wickramasingha spoke about the strength of the association. He explained the need of a strong association to improve businesses. He took Fisheries Cooperative Society as an example and said they are very strong and creative. He asked to the three associations to assist other associations with knowledge acquired by this pilot project. He also explained that the JICA Project Team will be handing over equipment to the associations, therefore strong associations are needed.
- Mr. Sumanadasa explained the ownership of equipment. In his speech he explained there should be two agreements made as follows:
  - Agreement between JICA Project Team and reference association; and
  - Agreement between association and members of the association.

- Mr. Sumanadasa took the responsibility to draft the two agreements for the Food Base Industry Association before the equipment handover ceremony that is scheduled on the 26th of August 2005. All members of the Steering Committee meeting who were present agreed.
- Mr. Narayana asked that if the equipment was lost or sold, what actions should be taken by the association. Mr. Sumanadasa and Mr. Wickramasinghe answered that the associations are covered by the above two agreements.
- Mr. Wickramasinghe spoke about the Micro Credit program with UNDP and explained that UNDP has already agreed to give assistance to the Food Base Industries Association and Garage & Vehicle Repair Industries Association. This program is still going on and it will take time to implement. However he promised to discuss with UNDP to provide micro credit assistance to suppliers of ornamental fish. He will let us know the progress of that discussion.
- Mr. Tony - president of the Garage & Vehicle Repair Industries Association asked a question regarding the loan they already have and said that it is very difficult to take out a second loan. He also asked the JICA Project Team and IDB if they could please make it a necessary arrangement to have a grace period or to reduce or do away with interest rates for those who already having taken out loans with public banks.
- Mr. Sumanadasa asked him to prepare a list of those members and the amount of their loans. He said that afterwards he would consider possible actions to be taken. He also mentioned there is a loan scheme at the SME bank and he could direct the members who would like to take out a low interest rate loan, to the bank.
- Then Mr. Kelum explained the project implementation schedule.
- In his speech, he mentioned implementation details as follows; 26th of August 2005 the equipment for Food Base Industry, late September 2005 the equipment for Ornamental Fish Industry and mid of October 2005 the equipment for Garage & Vehicle Repair Industries will be lended.
- Mr. Kelum also asked representatives of the association to write articles for the Newsletter that is issued by JICA Project Team.
- Mr. Laxman thanked JICA for giving them such an opportunity and asked to provide proper training from Marine University in Tangalle.
- The next steering committee meeting is on 7th September in 2005.
- After the vote of thanks by the Secretary, the meeting adjourned at 15.30 p.m.

Minutes of the Meeting of the 3rd Steering Committee in Small Scale Industry Support Pilot Project

The Japan International Cooperation Agency (JICA) - Matara
September 7, 2005

Secretary: Mr. Kelum Nishantha Wadumesthrige

Absent: Mr. Priyantha Abegunarathna - Chairmen Ornamental Fish Industries.
Mr. M. M. Dammika - Secretary Ornamental Fish Industries.
Mr. V. G. A. Asoka - Secretary Motor Vehicle Repair Industries.
Mr. D. P. Wickramasinghe - JICA Project Team.
Mr. W. Ubayasiri Narayana - Manager Berendina.
Mr. Laxshman Thennakoon - Vice President of Ornamental Fish Industries.

Present : Mr. Hideo Sakamoto - JICA Project Team.
Mr. Kelum Nishantha Wadumesthrige - JICA Project Team.
Mr. S. H. Sumanadasa Deputy Director- IDB, Provincial Office Matara.
Mr. T. N. Hettiarachchi - Secretary Food Base Industries.
Mr.N. D. Jayaweera - Committee Member Food Base Industries.
Mr. Tony Pearson - Chairmen Motor Vehicle Repair Industries.

- Third Steering Committee meeting of the Small Scale Industry Support Pilot Project was called to order at 10.00 a.m. in the JICA - Matara office by Mr. Hideo Sakamoto. Welcome address was given by Mr. Hideo Sakamoto.
- At the beginning of meeting Mr. Kelum Nishantha read the Minutes of the previous Steering Committee meeting. It was confirmed by all members of the Steering Committee meeting who was present.
- Mr. Hideo Sakamoto explained about the present progress of the project. In his speech he briefly mentioned about the sustainability of the association's after JICA's departure.
- Then Mr. Kelum discussed about the activities, which is schedule under the Small Scale Industry Support Pilot Project. Activities are follows:
    1. Seminar -Skill Training, Motivation, etc;
    2. Business consultation - Management, Marketing, etc;
    3. Study tower - Knowledge transfer;
    4. News Letter - Three Association should give their article to " Vera"; amnd
    5. Bank Loan - Micro Credit for working Capital.
- Mr. Sumanadasa supposed if we can have seminar from International Labor Organization it will benefit to improve their business well.

- Mr. Kelum mentioned about the exhibition which is schedule to have on 13th September 2005 and he gave the responsibility of organizing of the exhibition to Food Base Industry Association.
- Mr. Kelum made a schedule for Need identification workshop to three sectors discussing with the member of the steering committee. The steering committee got a decision about the Need identification for the Ornamental Fish Association should held only for working committee because of large membership. The schedule as follows:
  - Food Base Industry Association - 10th September 2005 - Samanmal Restaurant;
  - Garage and Vehicle Repair Association - 11th September - Samanmal Restaurant; and
  - Ornamental Fish Association - 12th September 2005 - Office Premises.
- Then discussion was tabled to discuss lending of equipment for Ornamental Fish Association people. Mr. Kelum emphasized it will be in mid of October 2005.
- Mr. Jayaweera - Acting president of the Food Base Industry Association requested please make an arrangement to have loan from UNDP programme.
- Mr. Kelum also made a request from representatives of the association to write articles for the News letter which is issued by JICA study team.
- The next steering committee meeting is on 07th October 2005.
- After the vote of thanks by the Secretary the meeting adjourned at 11.30 p.m.

ANNEX 6-6 Records of Evaluation Workshop on Small Scale Industry Support Pilot Project

(Original Record)

PART 6-I Food Processing Association
Venue: JICA Project Office
Date: 17.December 2005 at 9:30 a.m.

Session 1 Assistance Offered to the Association (except JICA pilot project)

What were the assistances offered to your Association?

	Supporter	Contents of Assistance
1	Divisional secretaries of District Secretary Matara	• Awareness on Tsunami for members • Psycho social programs • Coordination with GO's and NGO's to get the assistance. • Certified the beneficiaries to get assistance from the donors.
2	Industrial Development Board	• Coordination with donors and help them to identify the correct beneficiaries. • Supplied the equipments to some beneficiaries who doing carpentering, tailoring and electrical jobs.
3	Red cross	• Supply of Kitchen equipment. • Donation of a string hopper making machine
4	Sewalanka	• Already prepared the list of beneficiaries for giving business loan
5	Kantha Shakthi	• Group micro credit programme • Management training programme
6	Arthacharya Foundation	• Group and individual micro credit programme
7	Praja Shakthi	• Conducted a survey to find the affected small businesses.
8	International Organization for Migration	• Donation of sowing machines. • Donation of equipment for small businesses as well as carpenters, Masons and tailors. • Applied for assistance but still not response.
9	Sarvodaya Movement	• Training for sowing • Given their assistance to the non affected people from the tsunami. • Donation of coir yarn machines and coir • Business plan training
10	Goal	• Given assistance to cement blocks making businesses.
11	Oxfam	• Given assistance to the coir industry of Matara District.
12	UNDP	• Giving assistance to any type of businesses and conduct micro credit programme.

Session 2 Assistance of JICA Pilot Project - INPUT

1	Concerning Social Capital	• Formulation of the food processors association. • Guidance given on how to work as a united group and to achieve common objectives. • Expose to the business world.
2	Concerning Human Capital	• Business Management training. • Guidance given to how to diversify the businesses. • Guidance given to how to organize their activities properly. • Awareness on disaster management. • Members of the association going to have training on food processing technology and Management from Cathy Rich Food Processing Training Center.
3	Concerning Financial Capital	• Promise to provide financial assistance from UNDB to the members of the society through the Ruhunu Development Bank in low interest. • Introduction of other loan program in the different financial institution.
4	Concerning Physical Capital	• Donation of the equipment relevant to the businesses they are doing. • Other various items donated by the NGOs and the Government agencies

Session 3

Questions on Association capacity and assets after JICA's assistance

3-1 Institutional Capacity

	Evaluation Item	Score	Comments
1	Fairness of Management	C	There is no fairness management. Their communication is much difficult because they are scattered in Matara district. But they are concerning the businesses of other members.
2	Trust among members	A	Excellent improvement. Giving business know how to other members.
3	Internal relationship	A	Excellent improvement. Members are sharing their technical knowledge among them. Also they share the Market. They are exchanged their product among them. Members are helping each other when needed.
4	Involvement of members	C	No improvement. Participation of the members to the society activities is some what low.
5	Information access	C	No improvement. There is some barriers for information access to society. It is special for government institute.
6	External negotiation	C	There is no improvement. They have not communicated with other organizations to fulfill their needs.
7	Cooperate with other Association	C	No improvement. They have discussed with Other two associations that are formed by JICA to have a one organization as Small and Medium Entrepreneur's association.

	Evaluation Item	Score	Comments
9	Contribution to the outsiders.	C	Bad improvement. Society is not doing anything to the outsiders.
10	Contribution from the state sector	C	No improvement. Other than the Industrial Development Board of Sri Lanka no any department take care of them.
11	The influence by members to decision making	B	Involvement of the members in decision making is good. When the committee going resign member were not allow them to resign.

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Business management program	A	They doing their business using the knowledge they obtain from the management workshop. Most of the members have good market compare to before tsunami.
2	Food Exhibition	A	They organized first exhibition to show their colors and to say got up again. From that they got an experience and learnt many things how to organize such event. Not only that they have gained expert ' s consultation for minimized the week points of them.
3	Maldives fish production training	A	Now they have gained new knowledge in Maldives fish making using new mew methods that will guarantee a good market
4	JICA news letter.	B	Sharing knowledge and gathering knowledge It is supply good example for how to manage this kind of natural disaster.
5	Registration of Businesses	A	They have good recognition among the society as business people. Now they can access the loan program in the reputed financial institute.
6	Training on Food processing technology and Management	A	If we conduct this training they would be enhance quality of the products and efficiency of the production will be increase.

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Micro credit program from UNDB through the Ruhunu Development Bank	A	They are willing expand their businesses by having loan from that micro credit program.
2	Increase income	B	Because of having good equipment they are getting good income and so that they have some financial improvement.
3	Savings	B	There income is some what increase so from that income they save the money in the banks.

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Donation of equipment	A	Convenience of production. Improve the quality of the product. Production capacity also increased. Expansion of the market.

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

The Food Processing Industry association thinks that Institutional capacity building is more important than any other area and further said "To do a good thing need more time". Even though JICA team took long time, they gave us the best thing. Now the association has more confidence to face next tsunami. From the JICA project we understand the merits of the Business organization. Institutional capacity building is ensured the sustainability and enhances the human resources. That is important to strengthen the society. The physical capacity comes last because it can wash away by another tsunami but Institutional capacity can not wash away. As JICA does all theses activities the society appreciates the implemented activities.

Session 5 Quantitative Indicators

	Indicator	Data - After the Tsunami
1	Number of general meeting	4
2	Number of committee meeting	10
3	Participated rate of general and committee meetings	80% 90%
4	Number of Members	66
5	Membership Fee	40 Per Month
6	New Memberships	24
7	Registration Fee	350 (Including 10 share)
8	The loan taken from other financial institute	No
9	New businesses start after the tsunami	03
10	Activities of the working committee	Decision making and organizing the association.
11	Businesses still not started	05
12	Businesses diversification	10

No:	Name
1	Ms G.G.C. Liyanahrachi
2	Ms. Malani Gunasekara
3	Ms. Somawathi Mathgadera
4	Ms. R.A. Chandini
5	Ms. Lalani Dahanayake
6	Ms. Puspa Nilmini Nanayakkara
7	Ms. Eranidi Dahanayake
8	Ms. W.A. Indarani
9	Ms. K.B. Asoka Damayanthi
10	Ms. G Dili
11	Mr. W.S.Bandula
12	Mr. R.H.A. Genasena
13	Ms.H.G. Naidani
14	Ms. Karunasili Edirisinghe

No:	Name
15	Mr. N.D. Jayaweera
16	Mr. L.H.W. Ganiesh Kisanitha
17	Ms. Vayalte Jayawarendena
18	Mr. S.P.Abeywickrema
19	Ms. K.H. Sunethra Kanithi
20	Mr. T.N. Hettiarachi
21	Mr. E.A.A.P. Ajith

PART 6-2 Ornamental Fish Association
Venue: JICA Project Office
Date: 18.December 2005 at 9:30 a.m.

Session 1 Assistance offered to the Society (except JICA pilot project)

	Supporter	Contents of Assistance
1	Divisional secretaries of District Secretary Matara.	• Awareness on Tsunami for members • Psycho social programs • Coordination with GO's and NGO's to get the assistance. • Certified the beneficiaries to get assistance from the donors.
2	Industrial Development Board.	• Coordination with donors and help them to identify the correct beneficiaries. • Introduce the ornamental Industry to the JICA Tsunami rehabilitation project.
3	LEADS.	• Donation of 10 sets of diving equipment. • Donation of necessary equipment to the two collectors.
4	Post Gradate Institute - University of Sri Jayawardanapura	• Donation of two boats with engine and eight sets of diving equipment.
5	Exporters of Ornamental Fish	• Given money and foods jest after the Tsunami. • Donation of eight diving equipment. • Donation of ten diving tanks.
6	Swiss Lady	• Issued twenty diving certificate free of charge to the twenty divers.
7	Mr. Jeffri	• Donation of three boats.

Session 2 Assistance of JICA Pilot Project - INPUT

1	Concerning Social Capital	• Formulation of the Ornamental Fish Industry association. • Guidance given on how to work as a united group and to achieve common objectives. • Familiar with other divers in Matara district.
2	Concerning Human Capital	• Increase no of Lung divers. • Guidance given to how to organize their activities properly. • Awareness on disaster management. • They are going have trainings regarding the diving activities, Management training and seminar in sustainable management of natural resources.
3	Concerning Financial Capital	• Promise to provide financial assistance from UNDB to the members of the society (only for collectors) through the Ruhunu Development Bank in low interest. • Introduction of other loan programme in the different financial institution. • Because of having equipment they are having good fish catch then their income also increade.
4	Concerning Physical Capital	• Donation of diving equipment. • Other various items donated by the NGOs and the Government agencies

Session 3

Questions on Association capacity and assets after JICA's assistance

3-1 Institutional Capacity

	Evaluation Item	Score	Comments
1	Fairness of Management	D	There is no much contribution from the divers so management also de-motivated now. Compared to other two associations in Small and Medium Entrepreneur sector this association has large number of memberships who are scattered. So management of the association is some what difficult.
2	Trust among members	C	No improvement. They continue the sharing of their Knowledge with other members as they did in before the Tsunami.
3	Internal relationship	A	Good improvement. Members are sharing their technical knowledge among them. After having equipment it is easy to give technical know how because every one can have practical experience. They also help each other in urgent condition like funeral.
4	Involvement of members	C	No improvement. Participation of the members to the society activities is some what low.
5	Information access	C	No improvement. Individuals have information but association does not concern about the information because of their inactiveness.

	Evaluation Item	Score	Comments
6	External negotiation	A	There is Good improvement. They have communicated with diving experts (Surgeon Commander Sri Lanka Navy and University of Marine) to give proper training for divers.
7	Cooperate with other Association	B	There is an improvement. Their members also have membership from society of Fisheries cooperatives.
9	Contribution to the outsiders.	C	Bad improvement. Society is not doing anything to the outsiders.
10	Contribution from the state sector	C	No improvement. Other than the Industrial Development Board of Sri Lanka no any department take care of them.
11	The influence by members to decision making	C	Involvement of the members in decision making is not good. Committee takes the necessary decision.

3-2 Human Capacities

	Evaluation Item	Score	Comments
1	Formation of the association	A	Industry got recognition from the society Have an opportunity meet other divers in Marara district. And enhance their strength.
2	Provision of diving equipment	A	Divers are doing their activities independently. Increased the self-confidence to dive deep in the sea so their fish catch also increased.
3	JICA news letter.	B	Sharing knowledge and gathering knowledge It is supply good example for how to manage this kind of natural disaster.
4	Training on diving activities	A	If we give this training they would be able to minimize the hazards which they face day today activities.
5	Training on Business Management	A	If we conduct this training the financial knowledge of the beneficiaries will be enhanced. Efficiency of the business will be enhance.

3-3 Financial Capacities

	Evaluation Item	Score	Comments
1	Micro credit programme from UNDB through the Ruhunu Development Bank	A	They are willing expand their businesses by having loan from that micro credit programme.
2	Increase income	B	Because of having good equipment they are able to access more resources then getting good income and so that they have some financial improvement.
3	Savings	B	There income is some what increase so from that income they save the money in the banks.

3-4 Physical Assets

	Evaluation Item	Score	Comments
1	Donation of equipment	A	Amount of accessible natural resource are increased. Increased the assets.

Session 4 Co-assistance Approach

How do you evaluate JICA's Institutional Capacity Building approach with "Co-assistance"?

The Ornamental Fish Industry association thinks that Institutional capacity building is more important than any other area. But they believe because of the lack of cooperation of the members they are some what back word compared to the other two associations under the small and micro entrepreneur rehabilitation project by JICA. They further said even though with the little number of members we will carry our association. They appreciate the JICA project team for formation of their association. From the JICA project we understand the merits of the Business organization. Institutional capacity building is ensured the sustainability and enhances the human resources. That is important to strengthen the society. The physical capacity comes last because it can wash away by another tsunami but Institutional capacity can not wash away. As JICA does all theses activities the society appreciates the implemented activities.

Note:

- This Ornamental Fish industry association is some what bigger. So management of the association is difficult.
- If we can formed group of people who lives closer vicinity it will be more success than existing one. After formulation of small groups, representatives of these small groups can make next level of the organization.
- From this project we used bottom to top approach which is need more time to bring it to success level. This kind of community development needs more awareness program and series of seminar.

Session 5 Quantitative Indicators

	Indicator	Data - After the Tsunami
1	Number of general meeting	2
2	Number of committee meeting	11
3	Participated rate of general and committee meetings	80% 70%
4	Number of Members	174
5	Membership Fee	Lung Divers - Rs.100/= Skin Divers - Rs.50/= Collectors - Rs.200/=
6	New Memberships	5
8	The loan taken from other financial institute	No
9	New businesses start after the tsunami	10 (Divers convert as collectors)
10	Activities of the working committee	Decision making and organizing the association.
11	Businesses still not started	No
12	Businesses diversification	60%

No:	Name
1	Mr. M.M. Dhammika
2	Mr. Thaminda Kumara
3	Mr. J.P. Chaminda
4	Mr. G.P.H. Vajra Wasantha Kumara

ANNEX 6-7 Memorandum of Understanding for Small-scale Industry Pilot Project

Recovery, Rehabilitation and Development Project
for TSUNAMI Affected Area
of Southern Region of Sri Lanka

Matara Main Office
37, New Tangalle Rd., Kotuwegoda, Matara
Telephone: 077-697-8709
e-mail: sakamoto@padeco.co.jp

Colombo Satellite Office
No.19 Hedges Court, Colombo 10
Telephone: 077-9052609
e-mail: iwami@star.odn.ne.jp

28th July 2005

Memorandum of Understanding

The Industrial Development Board of Ceylon (IDB) and the JICA Study Team have discussed and reached an agreement for the implementation of the Pilot Project to support Small scale industries in Matara District. Both parties will take necessary action for the execution of this pilot project.

Following document is attached,

・ Summary Plan of Fishery Cooperatives Support Pilot Project

Mr. L. A. Kalukapuarachi
Director General
Industrial Development Board
of Ceylon

Mr. Yuichiro MOTOMURA
JICA Project Team

Summary of the pilot project plan

Terms of Reference for the Pilot Project
for Recovery, Rehabilitation and Development Project for Tsunami Affected Area of Southern Region in the Democratic Socialist Republic of Sri Lanka

1 Selection of Pilot Projects

Implementation of pilot projects as a part of this JICA Project has been agreed upon by the two governments at the initial stage. However, there are some roles to be fulfilled as well as some conditions to be satisfied by the pilot projects.

1.1 Role of Pilot Projects

The JICA Project Team will conduct these pilot projects for the following reasons:

- To demonstrate some parts of the rehabilitation plan proposed;
- To support the tsunami-affected people in less addressed topics and areas;
- To propose alternative ways of supporting rehabilitation; and
- To enhance social capacities to carry out actions, based on the strategies proposed.

1.2 Constraints and Strategic Criteria for Selection

Some conditions exist that prospective pilot projects must satisfy.

(1) Time Frame

Pilot projects should produce impacts by February 2006. This project is expected to terminate in March 2006. Therefore, support of the Project Team should also be completed within this timeframe. Pilot projects are expected to generate significant benefits on prospective beneficiaries very soon.

(2) Pilot projects should not support individuals impacted by the tsunami

The JICA Project is not in a position to directly compensate for damage to private property from the tsunami. Hence, the pilot project should not include any activities that deliver money, equipment, and/or property to individuals or private companies.

(3) Cost-effective Project Impacts

The JICA Project is considered as a Development Study, based on JICA definitions. A pilot project shall be first implemented on a small scale, to prove the assumptions that the Study Team puts forward. Compared with other schemes, such as grant and loan programs, the Development Study can allocate very limited amounts of money for the pilot project. At the same time, however, pilot projects should contribute to those in need as much as possible. As such, cost effectiveness of the activities is a high priority.

(4) Duplicability

Pilot projects are expected to be of good practice, meaning that they can be easily duplicated and/or extended to other areas of the tsunami-affected communities. Since the pilot projects can assist only a limited segment of the overall tsunami-affected communities and the JICA Projects Team cannot handle the extension of such works, the pilot project concepts must be easy to understand, to copy, and to apply.

(5) Sustainability

Even though the JICA Project Team can support the pilot projects for a short period, the activities and impacts will continue, even after the culmination of related activities for the JICA Project. In this regard, supports from the JICA side should be focused on institutional and/or human resource development, rather than the simple delivery of money and items/equipment.

1.3 Verification of the Pilot Projects

The JICA Project Team will implement pilot projects in order to verify assumptions proposed by the three-level assistance model described in Chapter 2. The Project Team will take Japanese experiences into consideration and propose rehabilitation approaches including:

- Facilitation of initiatives by tsunami-affected peoples' associations (CBOs) in the rehabilitation process;
- Enhancement of local public administration; and
- Collaboration between CBOs and public organizations.

However, these aspects are nothing more than assumptions that have yet to be demonstrated as valid in Sri Lanka. As such, verification is the primary objective for pilot project implementation. Verification mentioned in Subsection 2.3.4 will be conducted through the following three stages.

(1) Appraisal at the Preparation Stage

Even before commencement, pilot projects should be examined from various points of view. For example, CBOs are a very important topic. For instance, what is the legal status of and registration procedures for CBOs? What is the manner in which they work and also can CBOs obtain legal status to collaborate with government organizations.

(2) Monitoring at the Executing Stage

A participatory evaluation session for each pilot project will be conducted periodically, to gauge performance and effectiveness. The evaluation criteria include pilot project verification, relevance, effectiveness, efficiency, impact, and sustainability. These criteria are proposed by the DAC of OECD and are commonly employed in assessment of JICA projects.

(3) Evaluation during the Follow-up Stage

Some of the verification work (i.e., sustainability) cannot be conducted during the initial stage of the pilot projects. As such, measures such as effectiveness and sustainability of pilot projects will be assessed later. Lessons learned from these follow-up exercises can prove effective in improving projects for other rehabilitation projects in the future.

2 Plan of “Small-scale Industry Support Pilot Project”

(1) Project Title ：mall-scale Industry Support Pilot Project

(2) Location ：atara City and vicinity

(3) Counterpart Organization
：Industrial Development Board (IDB)

(4) 4Beneficiaries ：Food processing industry 40 businesses
Ornamental fish industry 25 businesses

(5) Project duration ：June to December 2005

(6) Background

The tsunami destroyed not only houses, but also offices and factories. Tsunami-affected people include those who lost jobs. Employment is a critical issue for regional rehabilitation from tsunami damages. A governmental institute, the Industrial Development Board, conducted a detailed survey on damage to the manufacturing

industry. IDB facilitates donor assistance to this sector, so that donors can correctly target individuals and companies that need external assistance for recovery. The JICA Project Team worked together with IDB to identify the following sectors as target groups for the pilot project:

- Food processing industry

Previously, many housewives and small business establishments in and around Matara city processed small cakes and other food items containing rice powder or wheat flour. They sold these products to restaurants and shops in the city. Even though the scale of their businesses is relatively small, they still need external assistance to assist their businesses to recover. No other donors are supporting this sector.

- Ornamental fish industry

The export of ornamental fish is a fast-growing industry in Sri Lanka. Young men along the coastline engage in this business, mainly as divers. Divers go into the deep sea to catch ornamental fishes and sell them to local brokers that convey the fish to Colombo for export. Divers previously enjoyed high incomes (Rs 15,000 - 20,000 per month). Due to the tsunami, divers and brokers lost their equipment and were unable to restart their activities without external assistance. Few donors are conscious of this sector. Recovery in this sector will produce a significant economic benefit to the communities.

(7) Project Goal

- Each small business establishment recovers from tsunami damage both in terms of economic and employment scale.

(8) Project Components

- Formulating small business establishment owners' associations for targeted sectors to enhance co-assistance.
- Renting of necessary equipment and tools for business operations.
- Providing technical and management advice.

(9) Implementing Organization Structure (including roles of the JICA team)

There will be six stakeholders in this pilot project.

- Association of Food Processing Industry

  This association was initiated in May 2005 to facilitate co-assistance among the tsunami-affected people in the same sector.

- Association of Ornamental Fish Industry
  This association was also formed in May 2005 to facilitate co-assistance among the tsunami-affected people in this sector.
- Industrial Development Board
- IDB is a government entity that helps target industries with technical consultation
- Enterprise Development Service Center (EDSC)
  EDSC is a non-profit organization (NPO) supported by the Sri Lankan Government, who offersconsulting advice to small business owners to formulate their business plans.
- Local NGO
  This Pilot Project expects that a local NGO will implement the pilot project.
- Project Team will financially and technically support this pilot project.

(10) Tasks of the Pilot Project

The tasks are shown in Table 1.

Table 1 Tasks for Small-scale Industry Support Pilot Project

No.	Activity	Contents
1	Establishing two business associations	After workshops for the two targeted sectors, tsunami-affected business persons formulated a business association. Registration work costs some.
2	Processing membership registry	Pilot project will examine if the association applicants are really tsunami-affected people or not
3	Formulating of business plan	Each business enterprise makes its business plan for a realistic rehabilitation support
4	Renting out of equipment	Equipment and tools for reopening the businesses are rented
5	Providing consultations and seminars	IDB conducts technical consultation EDSC supports business management
6	Managing the project	Sub-contract fee for local NGO (office, staffing, vehicle, office equipment, etc.)

(11) Use of Outside Contractor

Berendina, a local NGO, undertakes the implementation of this pilot project.

(12) Relationship to Other Japanese Assistance

The Japan Bank for International Cooperation (JBIC) has allocated a 10.0 billion Rs soft loan to the Sri Lankan Government for tsunami rehabilitation work. Part of this fund will be allocated for as a two-step loan for enterprises through local banks. However, beneficiary companies of this soft loan should possess banking credit with sufficient collateral. Much smaller business establishments cannot apply to this loan program. This pilot project focuses on smaller industries, which are the supplemental targets of the JBIC loan program.

(13) Applicability of Japanese Expertise and Experience

Various kinds of industrial sector associations exist in Japan such as chambers of commerce, as well as various business associations, who are active in co-assistance, technical and human resource development, and dialogue with relevant public administration. The JICA Project Team can transfer this know-how and expertise to enhance the functionality of small business associations in Sri Lanka.

(14) Sustainability and Expandability

This pilot project is to support the small industries in restarting their business. Since each beneficiary has business know-how and they obtain revenue from their activities, project impacts must be sustainable. Business associations will continue their activities in human resource development, business improvement, and so on.

(15) Environmental Impact

The purpose of this pilot project is to recover the functionality of small industries to pre-tsunami levels. There is no additional negative impact on the natural environment, however, some kinds of ornamental fish should be protected based on Washington Treaty. This pilot project does have positive environment impacts. For instance, the formulation of business associations will enhance co-assistance among the small business establishment and further develop the regional economy.

(16) Related Activities of Other Donors

Some local industries such as coir (coconut fiber) and lace are assisted by NGOs such as OXFAM. A French NGO offered some financial assistance to damaged small industries through IDB. This assistance does not include technical assistance and/or social development aspects. The Save the Children NGO is preparing a loan program to improve the livelihood of tsunami-affected women.

3 Implementation of Pilot Projects

3.1 Structure and arrangement for Pilot Projects

In order to satisfy all the conditions, the JICA Project Team has the following objectives in order to achieve sustainability, beneficial impacts, effectiveness, and efficiency:

- Each project will have a partnership with one or more public institutes;
- Each pilot project will facilitate its beneficiaries to formulate associations of tsunami- affected people (i.e., traditional, refugee, and business communities) for mutual help;
- A Sri Lankan NGO will execute the pilot projects to carefully facilitate socio-economic development of the beneficiaries; and

- The steering committee of each pilot project will include members that represent the beneficiaries, public administrators, the managing local NGO, and the JICA Project Team.

Figure 1 shows the implementing structure for pilot projects. The implementing structure based on this concept, will be formulated for each Pilot Project.

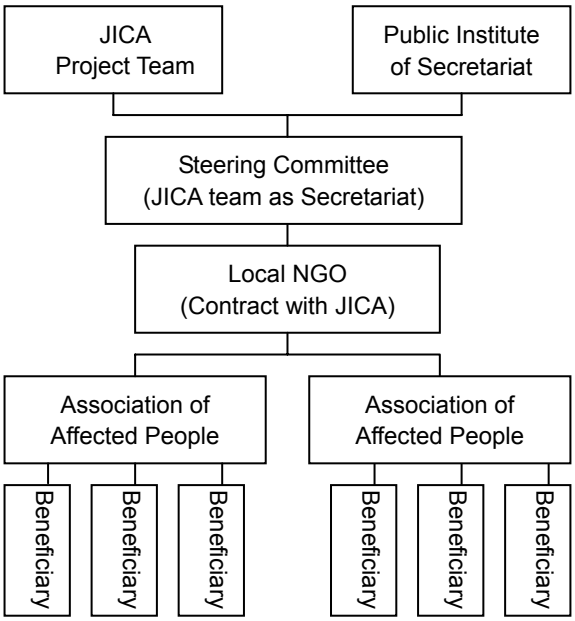


Figure 1 Organizational Structure of Pilot Project Implementation

3.2 Implementation Schedule

Table 2 shows schedule of pilot project implementation.

Table 2 Implementation Schedule of the Pilot Projects

Month (June 2005-March 2006)	6	7	8	9	10	11	12	1	2	3
Project Stages	Preparation	Implementation							Succession	
Contract with Local NGO		Contract								Termination
Events		Start					Evaluation		Hand-over	
Steering Committee		△	△	△	△	△	△	△		

3.3 Follow-up for Pilot Projects

(1) Pilot Project Structure after Culmination of the JICA Project

Pilot projects take a social-development approach rather than the simple delivery of cash and goods, facilitating capacity building of beneficiary and government organizations. Even after the end of the JICA Project, project activities will remain under the structure shown in Figure 2.

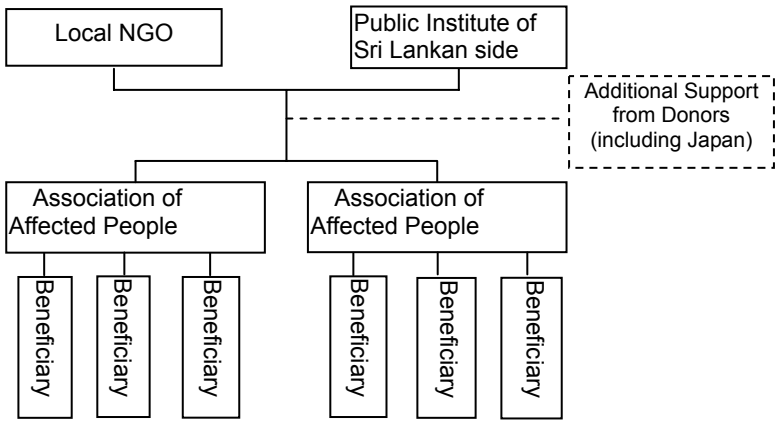


Figure 2 Pilot Project Structure after March 2006

(2) Follow-up Support

Realistic follow-up scheme should be adapted for sustainable development of the tsunami-affected communities through continuation of the pilot projects. This support for the pilot projects from the Japanese side can be executed through the following schemes noted below:

- Extending the NGO contract by the JICA Sri Lanka office;
- Conducting technical transfer by the JICA Technical Project, volunteer(s), or expert(s);
- Granting of tsunami relief soft loans by the Japan Bank for International Cooperation (JBIC); and
- Conducting a grass-root grant program by the Japanese Embassy.

ANNEX 7-1 Reconstruction of Matara Aqueduct Bridge

1 Geological Investigation

1.1 Field Investigation

Three onshore borings at Matara aqueduct site have been carried from April to May 2005. Field investigation consists of advancing three numbers of boreholes M-01, M-02 & M-03 with the coordinates shown in Table 1.

Table 1 Coordinates of Boreholes

Location	Number	N Code	E Code	Elevation (MSL)
Matara aqueduct site	M-01	81787.7104	178808.6542	+ 2.060
	M-02	81787.7104	178829.3008	- 0.422
	M-03	81766.5940	178848.8931	+ 0.720

Source: Project Team

(1) Borehole Investigation

The primary alternative to laboratory testing is to conduct in-situ tests which consist of bringing special equipment to the field, inserting it into the ground and testing the soil or rock while it is still underground. The raw data obtained from in-situ tests as general indicators of soil properties.

In order to the above the borehole investigation has performed with the assistance of rotary core drilling machine. In this investigation the walls of the boreholes were supported by 76mm dia. NX type flush coupling casings. In order to achieve better alignment the boreholes for the boreholes NWY flush coupling drill rods of 52mm dia. were used throughout the investigation.

As the most common practice, the normal rotary percussion drill system was adopted in the event, so that the flush is pumped down through the dill rods, passes out work area the bit and travels up words in the annular space between the drill rods and the out side of the hole carrying the cuttings with it. The requirement of removing cutting from the base of the borehole require flush fluid or high flush viscosity to maintain the cuttings in the suspension. In this investigation the pumped fresh water has utilized as the flushing fluid. The real expectation of introduces a flushing medium as follows:

- To remove the cuttings from boreholes;
- To cool the drilling bit, and drill rods; and
- To reduce mechanical and fluid friction.

Disturbed samples were obtained for preliminary soil description or for grouping of classification by plasticity or particle size distribution and many of the important ex-situ testing.

(2) Standard Penetration Test (SPT)

Standard Penetration Test (SPT) is the major determination factor of sub soil assessment through borehole investigation.

According to the specifications in this investigation the SPT was taken place at each of the borehole at every 1 m intervals.

(3) Test Procedure

a. SPT samples (Split spoon sampler) inserted into the boring and it has been connected via steel rods to 63.5 kg hammer.
b. The N value was completed by summing the blows counts for the 1 and 300 mm of penetration the blow count for the first 1,509 mm is retained for reference purposes but not used to compete N because the bottom of the boring is likely to be disturbed by drilling process and may be caused with loose sort that fell from the side of the boring.
c. The SPT samples were extracted then remount and saved the obtained soil sample in appropriate manners.
d. Boring to the depth of the next test been done with the above procedure. The intervals were maintained as every 1 m.

(4) Standard for the Use of S.P.T.

a. Careful borehole cleaning

The use of a light fitting “Shell” will usually induce loosening of the soil as a result of piping, which will reduce the SPT N value. An undersized shell should be used, since this will not permit significant suction to be developed at the bottom of the hole.

b. Water Balance

According to the standard the water level in the boring should always be kept above level, but it will be safer in most circumstances to ensure that the water level is kept at ground level.

c. Casing Level

Casing should not be advanced below the level at which the test is to commence, according to the standard. This seems inadequate. It should be specified that casing

should never be advanced below the base of the open borehole, in order to avoid displacement and compaction problems which may affect the soil for several diameters ahead of the coring.

d. Use of Cone

The split spoon in place of the shoe is permitted and should be refereed to as SPT (Cone). The SPT (Cone) should be in gravel to a void high N values as a result of larger particles lodging in the normal shoe.

Borehole Logs are shown from the next page.

1.2 Disturbed and Undisturbed Samples

Disturbed samples may be required for preliminary soil description, or for grouping or classification by consistency or particle size distribution. Referring to the borehole investigation the disturbed samples are extracted in ways of, SPT samples, Dry samples and SPT samples.

Undisturbed samples are samples in which the soil is subjected to little enough disturbance to allow laboratory experiments to determine the approximate physical characteristics of the soil, such as strength, compressibility and permeability.

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-01 Sheet : 1 of 3
Equipment & Methods : Rotary drilling with SPT	Location : : Proposed Bridge at Wellamadama, Dondra, Matara
Carried out for : **JICA Study Team**	Elevation :+2.060 MSL Chainage : Date 20/04//2005 22/04//2005 G.W.L AT 2.55m

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample: Test	Field Records
LOOSE BROWN PINKISH BROWN SILTY FINE SAND			1	1.00 - 1.45			S N=7	3 3 4
			2	2.00-2.45			S N=8	3 4 4 GWL AT 2.55m
	- 0.84		2.90					
VERY LOOSE BLACKISH GREY TO BLACK SLIGHTLY SILTY CLAYEY FINE SAND WITH SHELL FRAGMENTS			3	3.00-3.45			S N=5	2 2 3
			4	4.00-4.45			S N=3	1 1 2
			5	5.00-5.45			S N=3	1 1 2
			6	6.00-6.45			S N=7	2 3 4
	- 4.89		6.95					
SOFT BLUISH GREY, BANDED RED SILTY SAND			7	7.00-7.45			S N=2	1 2 0
			8	8.00-8.45			S N=3	1 1 2
			9				9.00 UD 9.50	
	- 7.54		9.60					
SAME AS NEXT DESCRIPTION			10	10.00-10.45			S N=14	5 6 8

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.

Borehole No : M-01
Sheet : 2 of 3

Equipment & Methods : Rotary drilling with SPT

Location : : Proposed Bridge at Wellamadama, Dondra, Matara.

Carried out for :

JICA Study Team

Elevation :+2.060 MSL Chainage : Date 20/04//2005 22/04//2005

G.W.L AT 2.55m

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample / Test: Test	Field Records
STIFF RED, YELLOWISH RED, MOTTLED GREY MEDIUM TO COARSE CLAYEY LATEITIC SAND			11	11.00-11.45			S N=13	4 5 8
	- 9.74		11.80					
GREYISH WHITE, GREY, PALE PINK SILTY MEDIUM TO COARSE SAND COMPLETELY WEATHERED ROCK			12	12.00-12.45			S N=16	4 5 11
			13	1300-13.45			S N=24	5 10 14
			14	14.00-14.45			S N=47	20 22 25
			15	15.00-15.45			S N>50	14 32 18/5cm/HB
			16	16.00-16.45			S N>50	23 27/12cm HB
			17	17.00-.17.45			S N=47	17 20 27
	- 15.44		17.50					
WASH SAMPLE : PINKISH GREY MEDIUM SAND HIGHLY WEATHERED ROCK			18	18.00-18.45			S N>50	20/HB
	- 16.44		18.50					
SAME AS NEXT DESCRIPTION			19		C=0%	r=0%		
			20					

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-01 Sheet 3 of 3
Equipment & Methods : Rotary drilling with SPT	Location : Proposed Bridge at Wellamadama, Dondra.
Carried out for : **JICA Study Team**	Elevation :+2.060 MSL Chainage : Date 20/04//2005 – 22/04//2005 G.W.L AT 2.55m

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample: Test	Field Records
WASH SAMPLE : PINKISH GREY MEDIUM SAND HIGHLY WEATHERED ROCK	-19.44		21		C=0%	r=0%	S N>50	
BOREHOLE TERMINATED AT THE DEPTH OF 21.50m			21.50 22 23 24 25 26 27 17.50 28 29 30					

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-02 Sheet : 1 of 3
Equipment & Methods : Rotary drilling with SPT	Location : Proposed Bridge at Wellamadama, Dondra.
Carried out for : **JICA Study Team**	Elevation : -0.422 MSL Chainage : Date 26/04//2005 27/04//2005 G.W.L AT 0.00m (SURFACE LEVEL)

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample / Test: Test	Field Records
VERY LOOSE PALE PINK, LIGHT BROWN, SILTY FINE TO MEDIUM SAND			1	1.00-1.45			S N=0	1 0 0
			2	2.00-2.45			S N=0	1 0 0
			3	3.00-3.45			S N=3	2 1 2
			4	4.00-4.45			S N=12	5 6 6
	-5.422		5	5.00-5.45			S N=9	3 3 6
STIFF RED, YELLOW, GREY MEDIUM TO COARSE CLAYEY LATERITIC SAND			6	6.00-6.45			S N=22	6 8 14
			7	7.00-7.45			S N=13	3 3 10
	-8.422		8	8.00-8.45			S N=15	2 5 10
VERY STIFF GREY, REDDISH BROWN FINE CLAYEY SAND			9	9.00-9.45			S N=29	5 11 18
			9.50					
			10	10.00-10.45			S N>50	13 25 25/7cm/HB

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-02 Sheet 2 of 3
Equipment & Methods : Rotary drilling with SPT	Location : Proposed Bridge at Wellamadama, Dondra.
Carried out for : **JICA Study Team**	Elevation : -0.422 MSL Chainage : Date 26/04//2005 27/04//2005 G.W.L AT 0.00m (SURFACE LEVEL)

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample / Test: Test	Field Records
BROWN, YELLOWISH BROWN GREY SLIGHTLY CLAYEY SILTY FINE TO MEDIUM SAND COMPELETELY WEATHERED ROCK			11	11.00-11.45			S N>50	50 HB
			12	12.00-12.45			S N>50	19 31/13cm HB
	-13.422		13	1300-13.45			S N>50	50/5cm HB
YELLOW TO PALE YELLOW LIGHT BROWN SILTY MEDIUM TO COARSE SAND COMPLETELY WEATHERED ROCK			14	14.00-14.45			S N>50	20/HB
	-15.422		15					
WASH SAMPLE : GREYISH PINK MEDIUM TO COARSE SAND HIGHLY WEATHERED ROCK			16		C=0%	r=0%		
	-17.422		17					
WASH SAMPLE : GREYISH PINK MEDIUM TO COARSE SAND HIGHLY WEATHERED ROCK			18		C=0%	r=0%		
	-19.422		19					
SAME AS NEXT DESCRIPTION			20		C=0%	r=0%		

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

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B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-02 Sheet 3 of 3
Equipment & Methods : Rotary drilling with SPT	Location : Proposed Bridge at Wellamadama, Dondra.
Carried out for : **JICA Study Team**	Elevation :-0.422 MSL Chainage : Date 26/04//2005 27/04//2005 G.W.L AT 0.00m (SURFACE LEVEL)

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample / Test: Test	Field Records
WASH SAMPLE : PINKISH GREY MEDIUM SAND HIGHLY WEATHERED ROCK	-21.422		21		C=0%	r=0%		
BOREHOLE TERMINATED AT THE DEPTH OF 21.00m			22 23 24 25 26 27 28 29 30					

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

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W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.	Borehole No : M-03 Sheet : 1 of 3
Equipment & Methods : Rotary drilling with SPT	Location : Proposed Bridge at Wellamadama, Dondra, Matara.
Carried out for : **JICA Study Team**	Elevation : +0.720 MSL Chainage : Date 22/04//2005 24/04//2005 G.W.L AT 1.15m

Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test: Depth & Thickness (m)	Sample: Type	Sample: No	Sample / Test: Test	Field Records
LOOSE, GREY, PALE PINK, BLACK, SLIGHTLY CLAYEY SILTY FINE SAND WITH SHELL FRAGMENTS			1	1.00-1.45			S N=13	3 5 8
			2	2.00-2.45			S N=7	2 3 4
			3	3.00-3.45			S N=3	1 1 2
			4	4.00-4.45			S N=12	2 4 8
			5	5.00-5.45			S N=3	1 1 2
	- 4.68		5.40					
FIRM RED, BROWNISH RED, MOTTLED GREY MEDIUM TO COARSE CLAYEY LATERITIC SAND			6	6.00-6.45			S N=7	4 3 4
	-6.28		7	7.00-7.45			S N=8	3 4 4
SOFT GREY TO YELLOWISH GREY FINE TO MEDIUM CLAYEY SAND							7.45 UD 8.00	
			8	8.00-8.45			S N=2	2 1 1
	- 8.18		8.90					
REDDISH BROWN YELLOW, GREY SLIGHTLY CLAYEY SILTY MEDIUM SAND SHOWS RELICT STRUCTURE COMPLETELY WEATHERED ROCK			9	9.00-9.45			S N=22	4 9 13
			10	10.00-10.45			S N=41	10 16 25

GWL AT 1.15m

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.								Borehole No : M-03 Sheet 2 of 3
Equipment & Methods : Rotary drilling with SPT				Location : Proposed Bridge at Wellamadama, Dondra, Matara.				
Carried out for : **JICA Study Team**				Elevation :+0.720 MSL Chainage : G.W.L AT 1.15m				Date 22/04//2005 24/04//2005
Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test Depth & Thickness (m)	Sample Type	No	Test	Field Records
YELLOW, BROWNISH YELLOW, LIGHT BROWN, SLIGHTLY SILTY MEDIUM TO COARSE SAND COMPLETELY WEATHERED ROCK			11	11.00-11.45			S N>50	18 34 16/5cm/HB
			12	12.00-12.45			S N=27	7 12 15
			13	1300-13.45			S N>50	13 37 13/5cm
			14	14.00-14.45			S N=45	17 27 18
	- 14.28		15	15.00-.15.45			S N>50	10 15 34/10cm
BROWN, GREY, PALE YELLOW, SILTY MEDIUM TO COARSE SAND SHOWS RELICT STRUCTURE COMPLETELY WEATHERED ROCK			16	16.00-16.45			S N>50	15 30 20/10cm
	- 15.78		16.50					
GREYISH PINK, BANDED BLACK AND WHITE SILTY MEDIUM TO COARSE SAND SHOWS RELICT STRUCTURE COMPLETELY WEATHERED ROCK	- 16.78		17	17.00-17.45			S N>50	50/12cm HB
			17.50					
WASH SAMPLE : GREYISH PINK MEDIUM SAND HIGHLY WEATHERED ROCK	- 18.28		18		C=0%	r=0%		
			19					
WASH SAMPLE : GREYISH PINK MEDIUM SAND HIGHLY WEATHERED ROCK					C=0%	r=0%		
			20					

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

D - Disturbed Sample
B - Bulk Sample
W - Water Sample
WS-Wash Sample
UD- Undisturbed Sample
- Position (P) Tube (u)
S - Standard Penetration Test (SPT)
V - Vane Test
C - Core Recovery (CR), %
r -Rock Quality Designation (RQD) %
HB-Hammer Bounce
FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

Engineering & Laboratory Services (Pvt.) Ltd.								Borehole No : M-03 Sheet 3 of 3
Equipment & Methods : Rotary drilling with SPT				Location : Proposed Bridge at Wellamadama, Dondra, Matara.				
Carried out for : **JICA Study Team**				Elevation : +0.720 MSL Chainage : G.W.L AT 1.15m				Date 22/04//2005 24/04//2005
Description of Strata	Reduced Level (m)	Legend	Depth (m)	Sample / Test Depth & Thickness (m)	Sample Type	No	Test	Field Records
SAME AS PREVIOUS DESCRIPTION	- 19.78		20.50		C=0%	r=0%		
BOREHOLE TERMINATED AT THE DEPTH OF 20,.50 m			21 22 23 24 25 26 27 17.50 28 29 30					

SPT : Where full 0.3 m penetration has not been achieved the number of blows for the quoted penetration is given (not N-value)
Depths : All depths and reduced levels in meter.
GWL : Ground Water Level observed inside the Borehole, after the saturation.

Sample Key / Test Key

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FD- Free Down

Remarks: Borehole commencement level taken as zero

Logged By : R.M.W.K. Rathnayaka.
Supervised By: P. Samanpriya
Drilled By: U. Kumarasiri
Scale:1:50 Fig:

1.3 Laboratory Investigations

Laboratory investigations were taken place in order asses the sub surface characteristics referring to the underneath strata variation. Performance has been made as per British Standard, unless otherwise stated. Summary of the laboratory investigation for the geo technical investigation is shown in Table 2.

Table 2 Summary of Laboratory Test

BH No.	Depth	Soil Description	Unified Soil Class	NMC	SG	Atterberg Limit			Grain Size Analysis			UCT Soil	Direct Shear Test		Triaxial Compression test	Chemical Analysis		
						LL	PL	PI	Fines	Sand	Gravel							
									< 0.075	2.00-0.075	>2.0mm	q_u	C	□	C_u	PH	Chloride	Sulphate
				%		%	%	%	%	%	%	kPa	kPa		kPa		%	%
BH1	1.00-1.45	Silty Sand	SM	12.48	-	NP	NP	NP	19.15	68.75	12.10	-	-	-	-	-	-	-
	2.00-2.45	Poorly Graded Sand	SP	13.00	-	NP	NP	NP	1.30	98.70	0.00	-	-	-	-	-	-	-
	3.00-3.45	Poorly Graded Sand with Silt	SP-SM	26.13	-	NP	NP	NP	5.75	92.10	2.15	-	-	-	-	-	-	-
	5.00-5.45	Poorly Graded Sand with Silt	SP-SM	17.30	-	NP	NP	NP	7.59	92.07	0.34	-	-	-	-	-	-	-
	6.00-6.45	Poorly Graded Sand with Silt	SP-SM	17.81	-	NP	NP	NP	11.11	86.86	2.03	-	-	-	-	-	-	-
	7.00-7.45	Silty Sand	SM	18.12	-	NP	NP	NP	19.12	75.28	5.60	-	-	-	-	-	-	-
	8.00-8.45	Silty Sand	SM	15.42	-	NP	NP	NP	16.07	80.90	3.03	-	-	-	-	-	-	-
	9.00-9.50	-	-	-	2.62	NP	NP	NP	-	-	-	123.0	-	-	43.0	-	-	-
	10.00-10.45	Clayey Sand	SC	18.05	-	37.00	23.00	14.00	38.65	46.47	14.88	-	-	-	-	-	-	-
	11.00-11.45	Clayey Sand	SC	16.35	-	34.00	15.00	18.00	33.73	47.83	18.44	-	-	-	-	6.300	0.280	0.071
	14.00-14.45	Silty Sand	SM	14.10	-	NP	NP	NP	20.33	78.03	1.64	-	-	-	-	-	-	-
BH2	3.00-3.45	Silty Sand	SM	19.75	-	NP	NP	NP	24.90	74.01	1.09	-	-	-	-	-	-	-
	4.00-4.45	Poorly Graded Sand	SP	18.51	-	NP	NP	NP	4.80	94.70	0.50	-	-	-	-	-	-	-
	5.00-5.45	Clayey Sand	SC	19.53	-	52.80	25.40	27.40	47.63	41.49	10.88	-	-	-	-	-	-	-
	6.00-6.45	Inorganic Clay with High Plasticity	CH	21.59	-	52.40	22.40	30.00	57.62	36.24	6.14	-	-	-	-	-	-	-
	7.00-7.45	Clayey Sand with Gravel	SC	20.23	-	40.60	23.20	17.40	26.86	49.15	23.99	-	-	-	-	6.500	0.290	0.065
	8.00-8.45	Clayey Sand	SC	27.63	-	30.90	22.00	3.90	41.19	57.78	1.03	-	-	-	-	-	-	-
	9.00-9.45	Clayey Sand	SC	23.48	-	34.00	19.40	14.10	45.26	53.62	1.12	-	-	-	-	-	-	-
	10.00-10.45	Clayey Sand	SC	20.41	-	29.20	18.60	10.60	26.05	61.76	12.19	-	-	-	-	-	-	-
	12.00-12.45	Clayey Sand	SC	20.07	-	NP	NP	NP	41.23	55.07	3.70	-	-	-	-	-	-	-
	13.00-13.45	Silty Sand	SM	14.70	-	NP	NP	NP	21.95	76.26	1.79	-	-	-	-	-	-	-
BH3	1.00-1.45	Poorly Graded Sand with Silt	SP-SM	14.24	-	NP	NP	NP	5.96	79.32	14.72	-	-	-	-	-	-	-
	2.00-2.45	Poorly Graded Sand	SP	22.28	-	NP	NP	NP	2.93	97.04	0.03	-	-	-	-	7.300	0.135	0.054
	3.00-3.45	Poorly Graded Sand	SP	25.16	-	NP	NP	NP	4.98	94.04	0.98	-	-	-	-	-	-	-
	4.00-4.45	Poorly Graded Sand with Silt	SP-SM	21.35	-	NP	NP	NP	6.51	91.41	2.08	-	-	-	-	-	-	-
	5.00-5.45	Silty Sand	SM	16.31	-	NP	NP	NP	15.67	82.12	2.21	-	-	-	-	-	-	-
	6.00-6.45	Clayey Sand	SC	21.69	-	58.00	19.80	38.20	36.61	41.04	22.35	-	-	-	-	-	-	-
	7.00-7.45	Inorganic Clay with Low Plasticity	CL	28.03	-	48.30	26.20	22.10	62.85	25.84	11.31	-	-	-	-	-	-	-
	7.45.-8.00	-	-	-	2.57	-	-	-	-	-	-	88.0	29.0	24.8	-	-	-	-
	8.00-8.45	Clayey Sand	SC	34.22	-	39.25	15.30	23.95	40.25	56.03	3.72	-	-	-	-	-	-	-
	9.00-9.45	Clayey Sand	SC	26.56	-	34.70	19.30	15.40	33.15	55.66	11.19	-	-	-	-	-	-	-
	15.00-15.45	Silty Sand	SM	19.63	-	NP	NP	NP	29.12	68.77	2.11	-	-	-	-	-	-	-

Source: Project Team

1.4 Photographs of the Field and Laboratory Investigation

View of the Site

Atterberg Limit Test

Boring Work

Unconfined Compression Test

2 Hydraulic Analysis

2.1 Introduction

(1) Background

The Matara Aqueduct was completely damaged and flushed away by the historical tsunami disaster in December 26th 2004, which is located in coastal line about 4 km east from Matara city, the southern part of the Sri Lanka.

Before the tsunami, the Aqueduct has being supplied water to Dondra area from the Nilwala River Basin (catchment area: 1,070 km^2), upstream of Matara city, through a 500 mm (diameter) steel water pipe running in parallel with the Wellamadama Bridge of National Road No.2. After the tsunami's damages on the Aqueduct, polyethylene-type water pipe is now provided as just a temporary facility.

(2) Necessity and Objective of Project

The beneficiaries by the water supply through the Matara Aqueduct are estimated to be about 13,000 houses and 78,000 peoples in Dondra area which is about 6 km east from Matara city. Therefore, for the beneficiary's area, permanent restoration works of the aqueduct is urgently required to provide a new aqueduct with a steel-type water pipe (500 mm dia.) against coming monsoon season occurring flood.
The Government of Sri Lanka had request Government of Japan to support for restoration works on the Aqueduct; plan, design, and re-construction.

(3) Scope of Works

The JICA Project team will conduct the following TORs to prepared detailed designs and tender documents for urgent restoration works of the Matara Aqueduct:

- Geological Investigations;
- Topographic Survey;
- River Investigation and Hydraulic Analysis for design high water level; and
- Tender documents and design drawings of the Aqueduct.

The hydrological analysis will be conducted to determine design flood water level of the Aqueduct.

2.2 Site Condition

(1) Topography and Geology

Topography

Sri Lanka, an island in the Indian Ocean, is located in the east - southeast tip of the Indian subcontinent and situated from 6 ° to 10 ° north latitude and from 80 ° to 82 ° east longitude, whose national land is topographically divided into the following four regions:

- Central Highlands, ranging in elevation from 1,000 to 2,500 m;
- Northern Lowlands, having gentle sloping area;
- Southwest area, having steep sloping area; and
- Southeast area, having steep sloping area.

The northern part from the center of the island is almost plains, while the southern part is mountainous and surrounded by coastal plains. The highest point of in Sri Lanka is Mt. Pidurutalagala, 2,525 m above sea level, in Nuwara Eliya District. The country has a maximum length of about 430 km and a maximum width of about 220 km, and an area of about 65,000 km^2.

The project site of Matara Aqueduct is situated in Matara district between Galle and Hambantota districts belonging to a southern part of Sri Lanka. The project site is located in 40 km east from Gall, 40 km west from Tangalle, and 70 km west from Hambantota through National Road No.2 along coastal line, and is just closed to the Dondra Top within 1 km in the Matara side (in the west side of the Dondra Top), where it is famous for an southern tip of the island of Sri Lanka.

The Matara Aqueduct is crossing outlet channel of the Dandra Lagoon, where the channel's width is about 25 to 50 m, and its distance between the lagoon and seashore (sea level) is around 80 m. In the project basin, there are no obvious river-courses upstream of the Lagoon. Since the project basin area has been created and developed originated from Lagoon, the basin slope is almost flat.

Geology

This can be referred to previous chapter.

(2) Meteorology

General

The climate of Sri Lanka is generally characterized by a tropical monsoon, and annual average temperature is 27°C. The climate of Sri Lanka is generally divided into three types in based on topographic condition mentioned in sub-chapter 2.1. The northern and the south-east areas are generally classified by "Dry-Zone", other hand the central highlands

and the south-west areas belong to “Wet-Zone” with heavy rainfall. Area between the two areas (“Dry Zone” in the northern and south-east area, and “Wet Zone” in the central highlands and south-west area) is called as “Medium-Dry Zone”. The project site is located in the southern area belonging to the “Wet-Zone”.

Rainfall

The climate of Sri Lanka is significantly affected by two monsoons (South-West Monsoon and Northeast Monsoon) through the year, therefore the general climate can be divided into the four distinct periods as follow.

- South-West Monsoon (Yala) (May to September)
  There is monsoon blowing in from the south-east, Indian Ocean. During the period, 1,000 to 3,500 mm rainfall in the south-west part and 3,000 to 3,500 mm rainfall in the central highlands part occur respectively
- North-East Monsoon (Maha) (December to February)
  There is monsoon blowing in from the north-east, Indian Ocean. During the period, 500 to 2,500 mm rainfall in the east part of the island occurs.
- Inter-monsoon (March to April)
  Heavy rainfalls in the south-west part due to wet air flow from the south-west, Indian Ocean.
- Inter-monsoon (October to November)
  Heavy rainfalls occur in whole part of the country due to tropical cyclone in Indian Ocean.

Usually, more than 30 % of annual rainfall occurs during the south-west monsoon, another remaining 70 % is caused by the north-west monsoon. For rainfall data of the project site, monthly rainfall data of Galle and Hambantota are available as shown in Table 3 and Figure1. Compared the monthly rainfalls between the Galle and Hambantota, these rainfall pattern and its rainfall volume are completely different each other, annual rainfall of Hambantota is 37 % (878 mm) of the Galle (2,378 mm).

Table 3 Monthly Rainfall in Galle and Hambantota

Monthly Rainfall in Galle (unit: mm)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall	85	71	111	207	290	188	163	186	256	323	321	177	2,378

Source: Meteorological Department, “ Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000”

Monthly Rainfall in Hambantota (unit: mm)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall	88	0	0	11	65	28	93	24	43	29	228	269	878

Source: Meteorological Department, “ The Project for Implementation of Fishery Harbour Facilities and Fisheries Training Center at Tangalle, 2000”

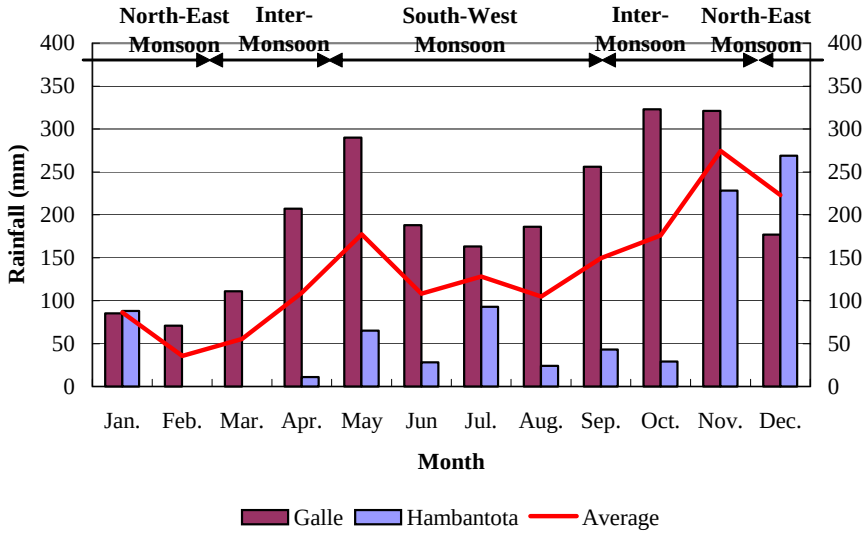


Figure 1 Monthly Rainfall in Galle and Hambantota

The period between January and March is most dry period for south-west area, Galle, and maximum rainfall comes along with the south-west monsoon between August and October. While, in the south-east area, Hambantota, there are a concentrated rainfall from May to August, November and December. Accordingly, it is required to consider the difference of rainfall pattern and volume between the Galle and Hambantota.

Temperature

Monthly maximum and minimum temperature in Galle is summarized in Table 4 and Figure 2.

Table 4 Monthly Temperature in Galle

(unit: °C)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul.	Aug	Sep.	Oct.	Nov.	Dec	Mean
Max.	29.0	29.9	30.6	30.6	29.8	29.0	28.6	28.4	28.5	28.7	29.0	29.1	29.3
Min.	22.8	23.0	23.9	24.8	25.5	25.2	24.8	24.7	24.7	24.1	23.5	23.1	24.2
Mean	25.9	26.5	27.3	27.7	27.7	27.1	26.7	26.6	26.6	26.4	26.3	26.1	26.8

Source: Meteorological Department, “Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000”

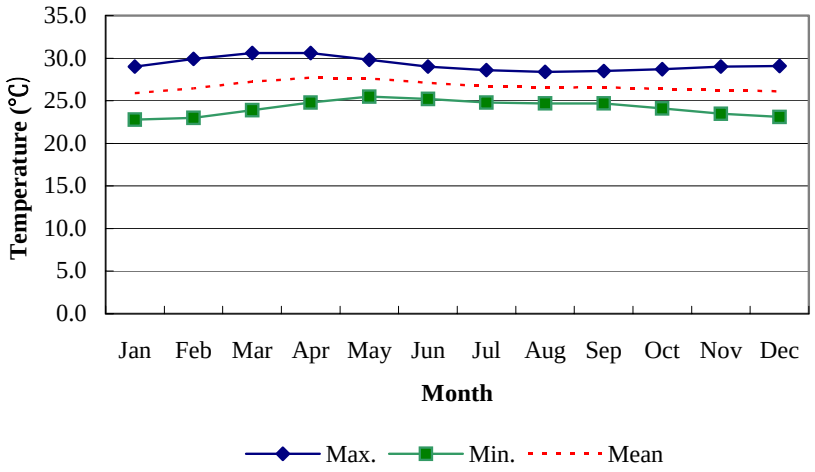


Figure 2 Monthly Temperatures in Galle

Humidity

As shown in Table 5 and Figure 3, the average humidity in the Galle area is around 80 % during daytime and 88 % during nighttime throughout the year. Daytime humidity increases in the months of July - August up to 85 % and relatively low humidity of the order 70 % occur in January - February.

Table 5 Monthly Humidity in Galle

(unit: Mean %)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
Day	78.2	72.8	73.6	78.2	81.6	88.3	84.2	85.8	82.8	81.7	79.2	79.0	80.0
Night	88.6	86.0	87.0	88.2	88.8	87.4	90.2	89.4	88.0	89.2	89.4	91.3	88.6

Source: Meteorological Department, " Study on Urgent Development of the Port of Galle as a Regional Port, Oct. 2000"

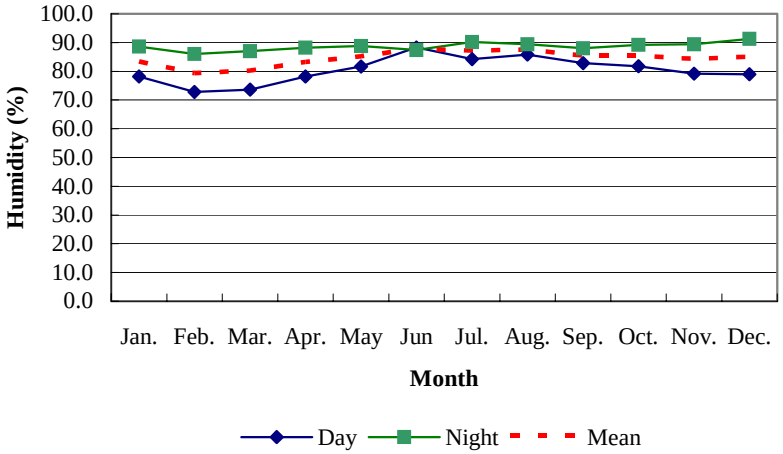


Figure 3 Monthly Mean Humidity in Galle

Wind

The wind pattern in Sri Lanka is mainly associated with the monsoons. During the south-west monsoon, western and southern parts of the island are normally subject to high winds. In the Galle area, wind speed occasionally reaches 15 - 20 knots (7.7 m/sec - 10.3 m/sec) during the south west monsoon. From the analysis of wind data collected a 3-year period at the Galle from 1986 to 1988, it has been found that wind speeds at the Galle exceeded 20 knots (= 10.3 m/sec) at a frequency of 0.1 % and 10 knots (= 7.7 m/sec) at a frequency of 10.5 %.

Wind direction in Galle is mostly confined to south-west sector. Wile during the north-east monsoon, wind and direction are not as regular as during south-west. However, the predominant wind directions during this season are found as north and east-north-east.
In Hambantota, monthly mean wind speeds in 1998 are 6.1 m/sec during south-west monsoon and 5.6 m/sec during north-east monsoon without variable changes. The predominant wind directions are south-west wind in the south-west monsoon, and north-east wind in the north-east monsoon respectively. Maximum wind speed of 15.4 m/sec was observed in September (Table 6).

Table 6 Monthly Wind Speed and Direction in Hambantota

(unit: m/sec)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Speed (m/sec)	10	12	11	12	15	12	11	13	15	12	13	11
Direction	NE	NE	E	SW	SW	SW	SW	SW	SW	SW	SW	SW

Source: Meteorological Department, " The Project for Implementation of Fishery Harbour Facilities and Fisheries Training Center at Tangalle, 2000

Tide

Tide levels at neighboring ports are summarized in Table 7.

Table 7 Tide Level at Neighboring Port of the Matara Aqueduct

(unit: EL, m)

Level / Location	Colombo port	Galle port	Tangalle port	Hambantota port	Kirinda port
HWL	+0.72	+0.61	+0.53	+0.47	+0.33
MSL	+0.38	+0.34	+0.28	+0.25	+0.17
LWL	+0.20	+0.10	+0.10	+0.10	+0.10
D.L.	+0.00	+0.00	+0.00	+0.00	+0.00

2.3 Hydrological and Hydraulic Analysises

(1) Introduction

Site Condition

The Matara Aqueduct is crossing outlet channel of the Dandra Lagoon, where the channel's width is about 25 - 50 m, and its distance between the lagoon and seashore (sea level) is around 80 m. When water level in the channel is higher than Sand Bar in

seashore-line, it is supposed that water flow will occur. According to the local people and site inspection by the study team, water flow has occurred habitually during rain period. Water flow mechanism in the site between the Dondra Lagoon and seaside is shown in Figure 7.6 of the main report. Therefore hydrological and hydraulic analysis is necessary to set design flood water level accurately for design of the aqueduct, which should be based on non-uniform flow calculation because water flow sections are succeeding irregularly.

Design Criteria

According to National Water Supply & Drainage Board, however, design criteria of design flood water level for aqueduct have not been standardized. Existing old pier of the aqueduct, which was damaged by TSUNAMI in December 2004, has belonged to National Road No.2 previously. On the other hand, for design of road / bridge in Sri Lanka, 100-year flood return period have been ordinary applied in case of national road crossing Major River. In addition, in case of crossing lagoon, generally 50-year flood return period is applied for design of bridge.

Target Design Flood Level

Since the aqueduct is an important facility for water supply to Dondra area, 50-year flood is reasonable for design of the aqueduct as same as design standard of road / bridge in Sri Lanka in case of crossing lagoon. Therefore, it is determined that design flood water level for the aqueduct is 50-year return period.

(2) Data Availability and Design Criteria

There are no hydrological records in the project site (flow discharge, daily / hourly rainfall etc.) for estimation of the design flood water level.

Topographic map scaled in 1/ 50,000 published by Survey Department of Sri Lanka is available (map name: Matara, sheet No. 91, revised in 1999). Based on the map, catchment area of the site is approximately estimated to be 3.5 km^2. Regarding to relation between catchment area and flood discharge estimation, since the catchment area is relatively small, basically flood peak estimation can be made by the Rational Method.

If flood peak estimation by the Rational Method is applied, a relation between regional rainfall intensity and flood frequency is necessary for the calculation. The relation between regional rainfall intensity and flood frequency is specified in a design standard of Irrigation Department, *Design of Irrigation Headworks for Small Catchments, May 1984*.

As mention above, water flow geometric conditions in the site are complicated and irregular due to existence of Lagoon in upstream, bridge, and Sand Bar in seashore in downstream, and flowing to sea. For the hydraulic calculation on flood water level, it is necessary to investigate site topographic and geological conditions. Accordingly, Survey and

topographic mapping works were conducted to get cross section data of the channel, which provided 1 / 200 scaled map with 1.0 m contour line. Especially, channel cross-section data is quite important for accurate calculation of flood water level by non-uniform flow analysis.

(3) Design Flood Water Level of Matara Aqueduct

Design flood discharge of the Matara Aqueduct was calculated by Rational Method applying regional rainfall intensity in Sri Lanka specified by design standard of Irrigation Department. Values of Regional Rainfall Intensity Factors (X and Y on Rainfall Intensity Formula; $I = X \cdot D^{-Y}$) are also utilized from the same standard. In this study, Storm Duration (Time of Concentration of flood), Runoff Coefficient, and Basin Storage Factor are discussed by two calculation method as alternative calculations.

Flood Peak Discharge

- Methodology

According to design standard of Irrigation Department, *Design of Irrigation Headworks for Small Catchmens 1984*, for design of irrigation works in Sri Lanka with catchment area less than 20 km^2, design flood shall be determined by the Rational Formula as below. Since catchment area of the site is 3.5 km^2; less than 20 km^2, therefore the Rational Method can be applied in this study for estimation of design flood peak discharge.

$$Q = \frac{1}{3.6} \times C \times I \times A$$

where, Q: Peak discharge (m^3/s)
C: Runoff coefficient
I: Rainfall intensity (mm/hr) for time of concentration (tc), and
A: Catchment area (km^2)

By the statistical analysis of observed records of rainfall in different stations, the Intensity -Duration-Frequency curves are obtained, which have been derived for the 6 hydrological Zones into Sri Lanka. In the standard, intensity curves could be given by the following formula.

$$I = X \times D^{-Y}$$

where, I: Rainfall Intensity (inches / hour)
D: Storm Duration (minute)
X and Y are two constants as given below

Table 8 gives the values of Rainfall Intensity Factors, X and Y for each Area Zone and Return Period when *I* is in inches per hour and *D* is in minutes.

Table 8 Regional Rainfall Intensity Factors (X, Y)

Return Period (in Year)	10		25		50		100	
	X	Y	X	Y	X	Y	X	Y
Zone-I	79.2	0.747	73.75	0.712	88.91	0.721	87.27	0.704
Zone-II	109.98	0.837	150.95	0.859	176.74	0.868	180.68	0.85
Zone-III	112.7	0.827	146.26	0.844	167.77	0.844	174.59	0.834
Zone-IV	47.19	0.645	63.26	0.662	72.08	0.664	66.19	0.632
Zone-V	32.67	0.684	49.25	0.731	52.09	0.719	56.75	0.715
Zone-IV	123.18	0.859	124.49	0.832	130.32	0.823	109.93	0.782

Source: Design of Irrigation Headworks for Small Cathments, 1984, Irrigation Department

The Matara Aqueduct site is located within Zone-III, so that the regional rainfall factors, X = 167.77 and Y = 0.844 is used for 50-year flood estimation.

Storm duration *D* and runoff coefficient *C* is given by some different methods. *D* can have durations such as the Time of concentration *Tc*, or duration of the critical storm *Dc*. There are many formulas and nomograms available to determine the time of concentration of a catchment. In this calculation, storm duration D is considered as Time of concentration *Tc*. *C* is defined by simplified estimation method according to each basin river condition.

In this study, the following standard or calculation method were considered comparatively applying two different factors of the Rational Method, Time of concentration *Tc (= D)*, and Runoff coefficient *C*.

Alternative Calculations

Standard in Sri Lanka (Irrigation Department)

i) Time of concentration

The standard of Irrigation Department gives the following formula for calculation of the time of concentration (*Tc*).

$$Tc = L / (V \times 60) + 15 \text{ minutes}$$

where, *L*: Longest water course (in feet)
V: River flow velocity (ft / sec)

According to the design standard, the 15 minutes is added for the 'Inlet Time' which is the time taken for a drop of water to travel on the flat surface of the land before it reaches a well defined river-let. Inlet time could be calculated from nomograms, and usually lines between 2 minutes to 20 minutes. Using 15 minutes for work within the scope of the standard is reasonable accurate.

Table 9 gives the average velocity with the water runs down a naturally formed watercourse in the catchment, as a value dependent on the average slope between the hydraulically most remote point and the point of interest. Average velocity is specified to be quite low assuming condition that the catchments in Sri Lanka are mostly jungle with partial development.

Table 9 Average Velocity in Each Basin Slope

Average Slope	Average Velocity V:(feet/sec)	Average Velocity V: (m/sec)
0 to 1/100	1.5	0.46
1/100 to 2/100	2.0	0.61
2/100 to 4/100	3.0	0.91
4/100 to 6/100	4.0	1.22
>= 6/100	5.0	1.52

Source: Design of Irrigation Headworks for Small Catchmens 1984, Irrigation Department

ii) Runoff Coefficient

The specified runoff coefficient in the standard is summarized in Table 10. The slope is taken as the difference in level between the highest point in the longest waterway and the point of interest divided by the length of the longest watercourse.

Table 10 Runoff Coefficient to Catchment Slope

Catchment Slope	Runoff Coefficient
0 to < 2	0.3
2 to < 4	0.4
=> 4	0.5

Source: Design of Irrigation Headworks for Small Catchmens 1984, Irrigation Department

iii) Time of concentration

Another calculation method for the *Tc* is defined by the following formula.

The project basin topographic condition is almost flat area with Lagoon, and then the Lagoon has a function such as natural dam, therefore basin storage factor (**α** = 1.30) should be considered in this method.

$$Tc = \frac{L^{1.15}}{51 \times \Delta H^{0.38}} \times \alpha$$

where, *Tc*: Time of concentration (min)
L: Length from catchment outlet to boundary (m), and
ΔH: Elevation change from catchment outlet to boundary
α: Basin Storage Factor α= 1.30

iv) Runoff Coefficient

The theoretical values of runoff coefficient related to watershed conditions are outlined in Table 11.

Table 11 Theoretical Values of Runoff Coefficient, *C*

Watershed Condition	Recommended Range of C values
Concrete or Asphalt Pavement	0.90 – 1.00
Steep Mountainous Area	0.75 – 0.90
Alluvial Deposits in Mountainous Area	0.70 – 0.80
Silt and Sand (Up- and Downstream)	0.50 – 0.75
Flat Agricultural Area	0.45 – 0.60
Paddy Field with Water	0.70 – 0.80
River in Mountainous Area	0.75 – 0.85
Rivers in Flat Plain Area	0.45 – 0.75
Major River in Flood Plain Area	0.50 – 0.75
Rocky Surface	0.70 – 0.90
Residential Area (City)	0.30 – 0.60

In the project basin, there are no obvious river-courses upstream of the Lagoon. Since the project basin area has been created and developed originated from Lagoon, the basin slope is almost flat.

Accordingly in this calculation method, runoff coefficient C = 0.45 (Rivers in Flat Plain Area) is adopted.

v) Calculation Results

Calculation factors and its results of the two cases as above are summarized in Table 12.

Table 12 Summary of Calculation Factors and Results

Item	Calculation Method for Peak Discharge	
	1) Standard in Sri Lanka (Irrigation Department)	2) Calculation Method applied in other Asian countries
Catchment Area (km^2)	3.5 km^2	3.5 km^2
Time of Concentration *Tc* (min)	124.0 min	58.1 min
Runoff Coefficient: *C*	0.30	0.45
Storage Factor: *s*	-	1.30
Rainfall Intensity (mm /hour)	97.46 mm / hour	110.8 mm / hour
Peak Discharge (50-year flood)	28.43 m^3 / sec	48.5 m^3 / sec

Adopted Design Flood Discharge

From the calculation results as above, both peak discharges of 50-year return period are estimated to be around 28.4 to 48.5 m^3 / sec. In a viewpoint of safety design side, design peak discharge of 50 m^3 / sec should be adopted for the design flood water level of the Matara Aqueduct.

Adopted Design Peak Discharge (50-year flood): 50 m^3 / sec

Hydraulic Calculation

i) Methodology

Width of the channel between the Dondra Lagoon and seashore (sea level) are irregular or changed variously in the section as summarized in Table 13. The channel width is gradually reduced to 20 m at Wellamadama Road Bridge due to abutment. After the bridge the channel will flow to reach seashore, where namely water flowing space became infinity.

Table 13 Plan of Geometric Condition of the Channel between Dondra Lagoon and Seashore

Sections (Upstream to Downstream)	Width of Channel (m)
Upstream of the Aqueduct	
a) Lagoon:	more than 100 m
b) Channel:	40-50 m
At the Aqueduct	
c) Channel:	30 m
Downstream of the Aqueduct	
d) At Bridge (National Road):	20 m
e) After the Bridge	More than 20 m to infinity (seashore)

Regarding to channel profile, channel's bottom level is also irregular; rising toward downstream side behaving like an estuary closing. What the phenomena is characteristic of Lagoon occurs, if channel water flow is not dominant, and then namely eittoral current is dominant to water flow from the channel.

Since the geometric condition of the watercourse is changing irregularly due to affect from eittoral current along the seashore, the non-uniform flow analysis should be carried out for calculation of flood water level in the channel continuously between the Lagoon and seashore. The design water level of the Aqueduct should be determined based on the non-uniform flow analysis, accordingly a hydraulic calculation program; HEC-RAS will be utilized in this study.

The evaluation of hydraulic conditions for the channel was based on application of the HEC-RAS model presented by the US Army Corps of Engineers. This is a computer-based program performing one-dimensional hydraulic analyses. It is designed for use in flood level estimation for rivers or channel and floodplains and assessment of the impact of bridge crossings on upstream flood levels and flow conditions.

The primary model inputs include cross-sections to define channel geometry, parameters to define the energy losses (normally based on the Manning's 'n' parameter for channel and over-bank flow areas), and the discharges for which flood levels and other hydraulic parameters are to be defined. The HEC-RAS calculation in this study required the following input data to estimate flood water in each cross section which is input to the program model.

- Cross Section Geometric Data with Elevation
- Design Peak Discharge
- Downstream Ending Point Water Level (Tide Water Level)
- Manning Coefficient (n)

It is required to conduct river cross section survey with appropriate interval along the river /channel. The site topographic and river cross section surveys will be done based on Mean Sea Level (MSL) as specified by the Survey Department of Sri Lanka.

Design Peak Discharge was calculated by the Rational Method, which was determined to be 50 m^3 /sec against 50-year flood return period.
In the non-uniform flow analysis, the ending downstream water level is necessary to be input where high tide water level is ordinarily applied in a viewpoint of safety design side. High Tide Water Level (HWL) recorded in neighboring port, Galle and Tangalle ports, are set as below based on the specified Datum Level.

Galle Port: HWL: + 0.60 m
Tangalle Port: HWL: + 0.53 m

Basically, the Datum Level of the ports will be Low Water Ordinary Spring Tide (LWOST) which is 0.433 m below the Mean Sea Level (MSL) as specified by the Survey Department of Sri Lanka. Accordingly, these high tide water levels in Galle and Tangalle ports can be converted as below based on the MSL.

Galle Port: HWL: EL 0.167 m (0.60 m - 0.433 m)
Tangalle Port: HWL: EL 0.097 m (0.53 m - 0.433 m)

Since the site is located between Galle and Tangalle, the high tide water level (HWL) EL 1.670 and EL 0.097 are used for the non uniform hydraulic calculation.

Ordinary, hydraulic calculation of flood water level is made applying high tide water level only as given condition. However flooding used to occur with Cyclone, so that in this calculation the following sea-wave conditions are additionally given to the design flood water level.

High Tide Water Level + Wave High (+1.24 m): HWL EL. 1.410 m
(= EL. 0.167m + 1.24m)

Actually, it is expected that the Sand Bar, which disturb water flow to run to downstream, will destroyed by water flow form the Lagoon and Cyclone's wave during storm, accordingly the flood water level will be reduced compared with the condition including sea-wave. Therefore, the condition given by wave height + 1.24 m is sufficiently safety design side for design of the Aqueduct.

ii) Manning Coefficient (n)

The Manning Coefficient (n) to be input the program is used.

iii) Calculation Result

For the calculation by the HEC-RAS, cross sections of the channel were in-put to the program. From the calculation results, in the both cases of applying high tide water level at Galle and Tangalle, there are no affects to flood water level at the Matara Aqueduct point. The flood water level at the Aqueduct is calculated to be EL. 1.59 m in the both cases. The flood water levels along the channel are summarized below.

Upstream of the Aqueduct: EL. 1.59 m (at the Lagoon Area)
At the Aqueduct: EL. 1.59 m
Downstream of the Aqueduct:
- At the Wellamadama Bridge: EL. 1.48 m to EL 1.41 m
- Downstream of the Bridge: EL. 1.09 m to EL 0.20 m

Flood water levels along the channel are calculated with adopted design peak flood discharge of 50 m^3 / sec (50-year flood) considering of flood inundation in the left bank floodplain. When cross section data is input to the HEC-RAS program, range of the floodplain will be set up. The calculation is conducted based on a basin model; Dondra Lagoon Basin Water Flow System.

Adopted Design Flood Water Level (50-year flood):
According to the calculation results above, design flood water level of the Aqueduct against 50-year flood is set to be EL. 1.59m.

Design Flood Water Level of the Matara Aqueduct: EL. 1.59 m (50-year flood)

(4) Required Bank Protection Works

Flow velocity in the channel is also calculated with the program. The velocities along the channel from seashore to upstream of the Aqueduct are calculated. The flow velocities along the channel are summarized below.

Upstream of the Aqueduct: 0.4 to 0.5 m/sec (at the Lagoon Area)
At the Aqueduct: 0.46 m /sec
Downstream of the Aqueduct:
- At the Wellamadama Bridge: 1.5 to 1.6 m/sec
- Downstream of the Bridge:
  a) 10 to 20 m downstream 3.0 to 2.0 m/sec
  b) after 20 m to seashore 1.5 to 0 m/sec

Channel bank protection works are designed based on flow velocity. According to the hydraulic calculation results, flow velocity around the Aqueduct is estimated to be 0.5 m/sec in the upstream, and 1.5 m/sec in the downstream respectively. In upstream of the Aqueduct, bank condition is good in viewpoints of geology, vegetation, and low flow velocity. Therefore bank protection works upstream of the Aqueduct is not so require.

However, flow velocity around the Aqueduct is 0.5 in upstream and 1.5 m/sec in downstream respectively, flow velocity can become higher after construction of the Aqueduct, bank protection works should be considered in the section between the Aqueduct and the Wellamadama Bridge to prevent bank erosion. Maximum velocity of 2.93 m/sec will occur in 10 - 20 m downstream of the Wellamadama Bridge (National Road No.2) with critical flow (Froude value: 0.98 to 1.00).

3 Tables

Table 14 Monthly Rainfall in 75 % Probability (1.33-year flood level)

(unit:mm)

Region	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
WU1	64	51	127	229	318	533	432	381	330	406	279	127	3,277
WU2	89	51	89	165	140	279	229	203	178	279	203	127	2,032
WU3	89	51	76	140	102	127	127	102	102	203	152	114	1,384
WM1	76	64	152	279	381	432	305	292	305	432	254	127	3,099
WM2	25	13	76	152	102	152	102	89	114	267	178	102	1,372
WM3	89	38	51	127	76	127	102	76	102	229	203	152	1,372
WL1	76	64	152	254	330	254	152	127	178	381	267	127	2,362
WL2	38	51	102	178	152	178	102	89	102	292	203	76	1,562
WL3	51	38	64	152	203	152	76	64	76	241	165	64	1,346
WL4	51	38	64	152	203	152	76	64	76	241	165	64	1,346
IU1	356	140	102	191	102	127	102	89	102	305	356	432	2,400
IU2	279	102	102	152	64	38	38	51	64	178	229	305	1,600
IU3	102	51	76	152	76	38	38	51	76	178	203	152	1,194
IM1	305	114	89	114	38	13	13	13	51	152	229	330	1,461
IM2	51	25	127	178	76	25	13	13	25	152	254	127	1,067
IM3	127	38	51	102	51	51	38	25	38	152	178	165	1,016
IL1	38	25	76	127	102	89	51	25	51	191	152	76	1,003
IL2	254	89	64	89	25	0	13	13	51	127	203	279	1,207
IL3	51	38	51	102	51	38	25	13	38	191	165	89	851
DL1	76	25	51	127	51	13	0	13	25	127	152	127	787
DL2	178	64	38	64	13	0	0	13	13	127	191	216	914
DL3	38	25	25	51	25	0	0	0	25	127	178	114	610
DL4	38	25	25	51	25	0	0	0	25	127	178	114	610
DL5	51	13	25	76	51	25	13	13	25	51	127	102	572

Summary of Monthly Rainfall (75 % probability) in / around the Matara Aqueduct Project Site

Region	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
WL4	51	38	64	152	203	152	76	64	76	241	165	64	1,346
IL1	38	25	76	127	102	89	51	25	51	191	152	76	1,003
IL2	254	89	64	89	25	0	13	13	51	127	203	279	1,207
IL3	51	38	51	102	51	38	25	13	38	191	165	89	851
Average	98	48	64	117	95	70	41	29	54	187	171	127	1,102

Source: Design of Irrigation Headworks for Small Catchments, May 1984, Irrigation Department

Table 15 Manning's Coefficient (n)

Type of Channel and Description	Minimum	Normal	Maximum
A. Natural Streams			
1. Main Channels			
a. Clean, straight, full, no rifts or deep pools	0.025	0.030	0.033
b. Same as above, but more stones and weeds	0.030	0.035	0.040
c. Clean, winding, some pools and shoals	0.033	0.040	0.045
d. Same as above, but some weeds and stones	0.035	0.045	0.050
e. Same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
f. Same as "d" but more stones	0.045	0.050	0.060
g. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
h. Very weedy reaches, deep pools, or floodways with heavy stands of timber and brush	0.070	0.100	0.150
2. Flood Plains			
a. Pasture no brush	0.025	0.030	0.035
1. Short grass	0.030	0.035	0.050
2. High grass			
b. Cultivated areas			
1. No crop	0.020	0.030	0.040
2. Mature row crops	0.025	0.035	0.045
3. Mature field crops	0.030	0.040	0.050
c. Brush			
1. scattered brush, heavy weeds	0.035	0.050	0.070
2. Light brush and trees, in winter	0.035	0.050	0.060
3. Light brush and trees, in summer	0.040	0.060	0.080
4. Medium to dense brush, in winter	0.045	0.070	0.110
5. Medium to dense brush, in summer	0.070	0.100	0.160
d. Trees			
1. Cleared land with tree stumps, no sprouts	0.030	0.040	0.050
2. Same as above, but heavy sprouts	0.050	0.060	0.080
3. Heavy stand of timber, few down trees, little undergrowth, flow below branches	0.080	0.100	0.120
4. Same as above, but with flow into branches	0.100	0.120	0.160
5. Dense willows, summer, straight	0.110	0.150	0.200
3. Mountain Streams, no vegetation in channel, banks usually steep, with trees and brush on banks submerged			
a. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
b. Bottom: cobbles with large boulders	0.040	0.050	0.070

Table 16 Calculation Results of Non-Uniform Flow Analysis by HEC-RAS

1) Downstream Ending Water Level : High Tide Water Level at Goalle Port EL. 0.167 m

Reach	River Station	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude
Dondra Lagoon	77,200	50.0	-0.72	1.59		1.60	0.000095	0.41	219.48	227.56	0.09
Dondra Lagoon	67,220	50.0	-0.98	1.59		1.60	0.000089	0.42	208.90	221.18	0.08
Dondra Lagoon	62,220	50.0	-0.63	1.59		1.60	0.000139	0.49	188.91	219.77	0.10
Dondra Lagoon	57,220	50.0	-0.42	1.59		1.60	0.000151	0.46	176.27	218.27	0.11
Dondra Lagoon	46,040	50.0	-0.40	1.48		1.58	0.002137	1.39	36.02	22.43	0.33
Dondra Lagoon	37,910	50.0	-0.13	1.41		1.56	0.002234	1.70	29.34	20.66	0.45
Dondra Lagoon	29,400	50.0	0.17	1.09	1.09	1.50	0.009267	2.93	18.69	25.09	0.98
Dondra Lagoon	19,400	50.0	0.48	0.95	0.95	1.18	0.011284	2.14	24.11	54.35	1.00
Dondra Lagoon	14,400	50.0	0.64	0.81	0.81	0.90	0.021666	1.52	39.40	228.00	1.17
Dondra Lagoon	0	50.0	-0.70	0.17	-0.58	0.17	0.000036	0.16	355.27	419.38	0.06

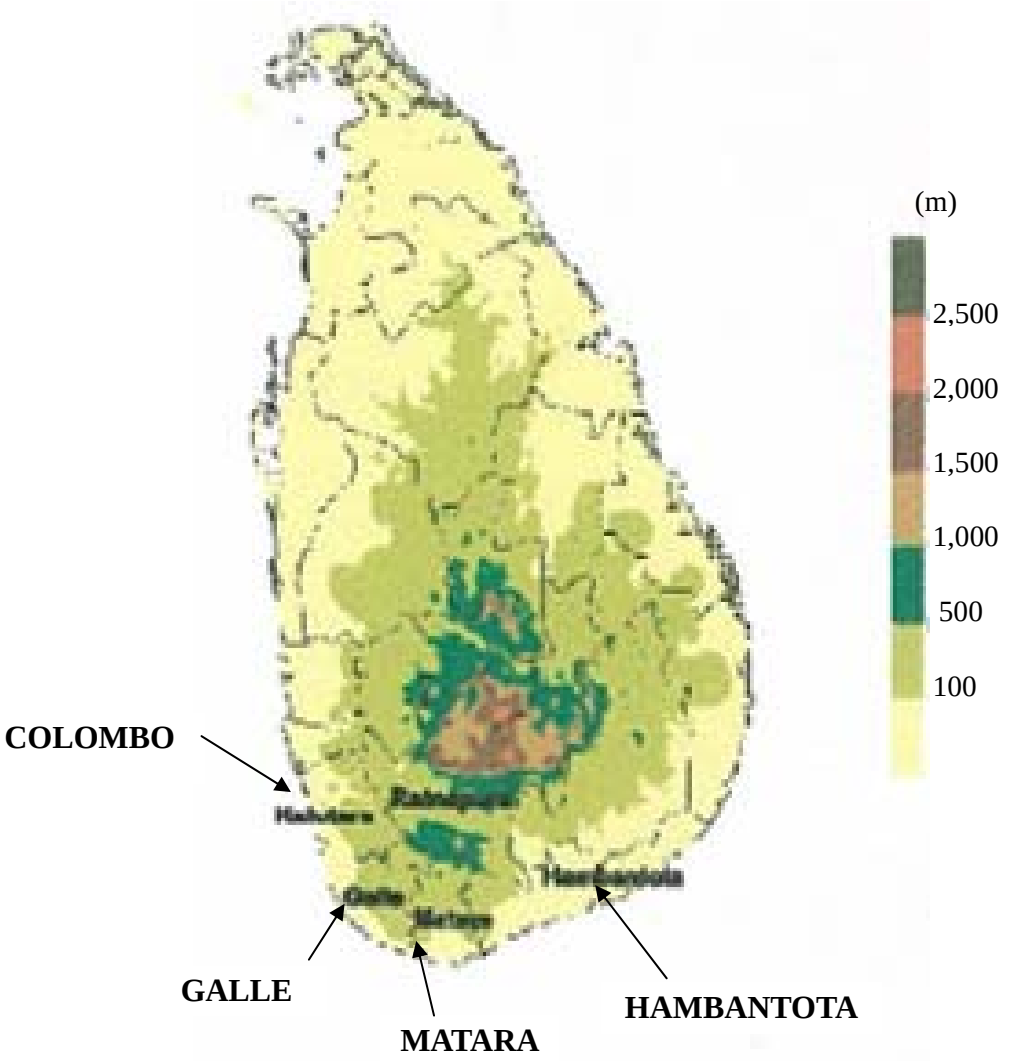
2) Downstream Ending Water Level : High Tide Water Level at Tangalle Port EL. 0.097 m

Reach	River Station	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude
Dondra Lagoon	77,200	50.0	-0.72	1.59		1.60	0.000095	0.41	219.48	227.56	0.09
Dondra Lagoon	67,220	50.0	-0.98	1.59		1.60	0.000089	0.42	208.90	221.18	0.08
Dondra Lagoon	62,220	50.0	-0.63	1.59		1.60	0.000139	0.49	188.91	219.77	0.10
Dondra Lagoon	57,220	50.0	-0.42	1.59		1.60	0.000151	0.46	176.27	218.27	0.11
Dondra Lagoon	46,040	50.0	-0.40	1.48		1.58	0.002137	1.39	36.02	22.43	0.33
Dondra Lagoon	37,910	50.0	-0.13	1.41		1.56	0.002234	1.70	29.34	20.66	0.45
Dondra Lagoon	29,400	50.0	0.17	1.09	1.09	1.50	0.009267	2.93	18.69	25.09	0.98
Dondra Lagoon	19,400	50.0	0.48	0.95	0.95	1.18	0.011284	2.14	24.11	54.35	1.00
Dondra Lagoon	14,400	50.0	0.64	0.81	0.81	0.90	0.021666	1.52	39.40	228.00	1.17
Dondra Lagoon	0	50.0	-0.70	0.10	-0.58	0.10	0.000048	0.18	325.92	417.81	0.07

3) Downstream Ending Water Level : High Tide Water Level EL. 0.167 m + Sea Wave + 1.24 m)

Reach	River Sta	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude
Dondra Lagoon	77,200	50.0	-0.72	1.60		1.60	0.000094	0.41	220.52	227.59	0.09
Dondra Lagoon	67,220	50.0	-0.98	1.60		1.60	0.000088	0.42	209.92	221.19	0.08
Dondra Lagoon	62,220	50.0	-0.63	1.59		1.60	0.000137	0.48	189.93	219.78	0.10
Dondra Lagoon	57,220	50.0	-0.42	1.59		1.60	0.000148	0.46	177.28	218.28	0.11
Dondra Lagoon	46,040	50.0	-0.40	1.49		1.59	0.002116	1.39	36.13	22.56	0.33
Dondra Lagoon	37,910	50.0	-0.13	1.42		1.57	0.002203	1.70	29.47	20.82	0.45
Dondra Lagoon	29,400	50.0	0.17	1.21		1.52	0.005903	2.55	21.97	27.94	0.80
Dondra Lagoon	19,400	50.0	0.48	1.39		1.42	0.000754	0.86	76.11	126.60	0.29
Dondra Lagoon	14,400	50.0	0.64	1.41		1.41	0.000150	0.34	176.49	234.51	0.12
Dondra Lagoon	0	50.0	-0.70	1.41	-0.58	1.41	0.000002	0.06	893.19	444.15	0.02

4 Figures

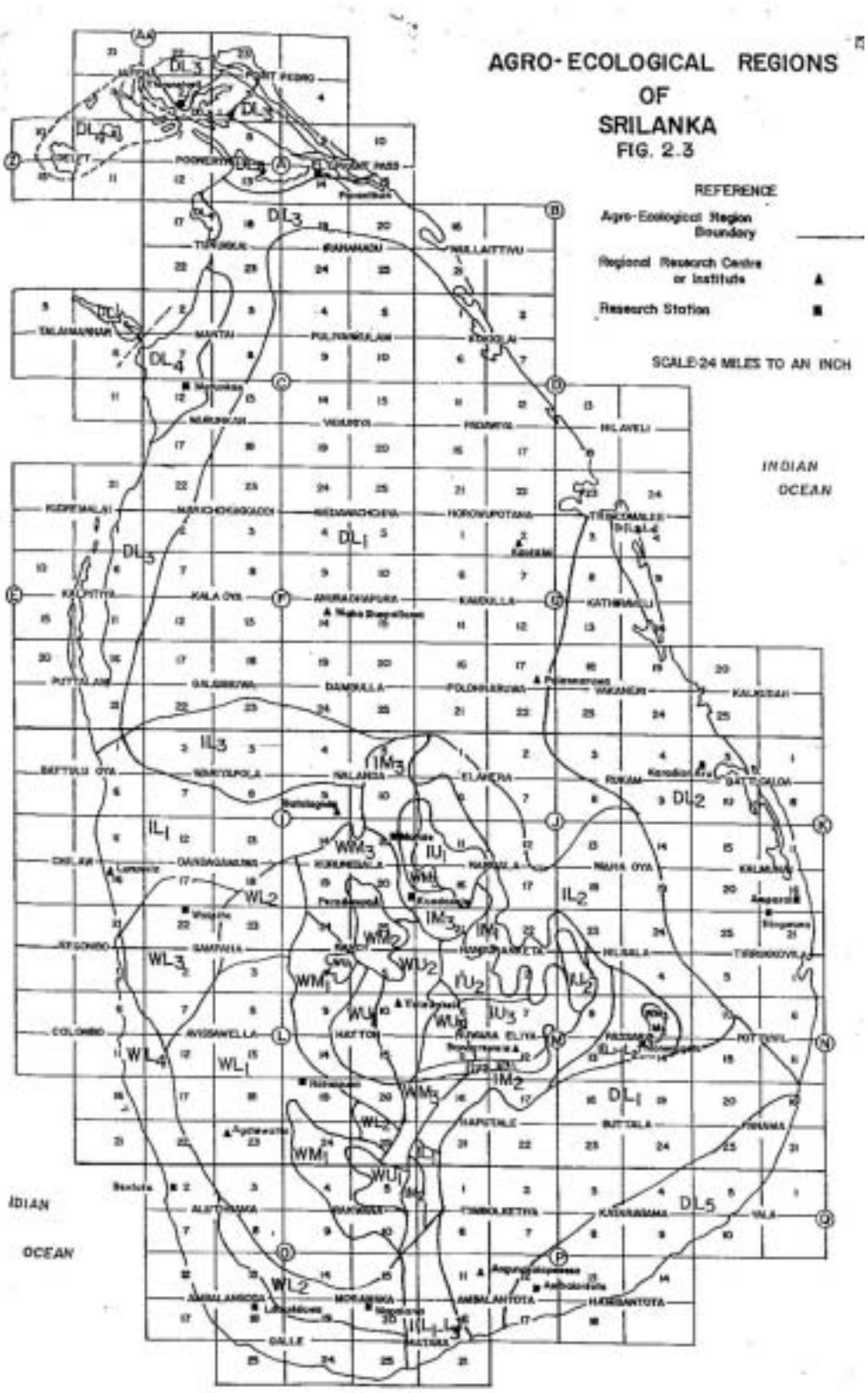


Source: Chandrapala, Lalith： Floods in Sri Lanka -2003.5

Figure 4 Topography of Sri Lanka

Map: 1 / 50,000 scale (No. 91, Matara)

Figure 5 Project Location and Catchment Area



Source: Design of Irrigation Headworks for Small Catchmens 1984, Irrigation Department

Figure 6 Agro-Ecological Regions of Sri Lanka

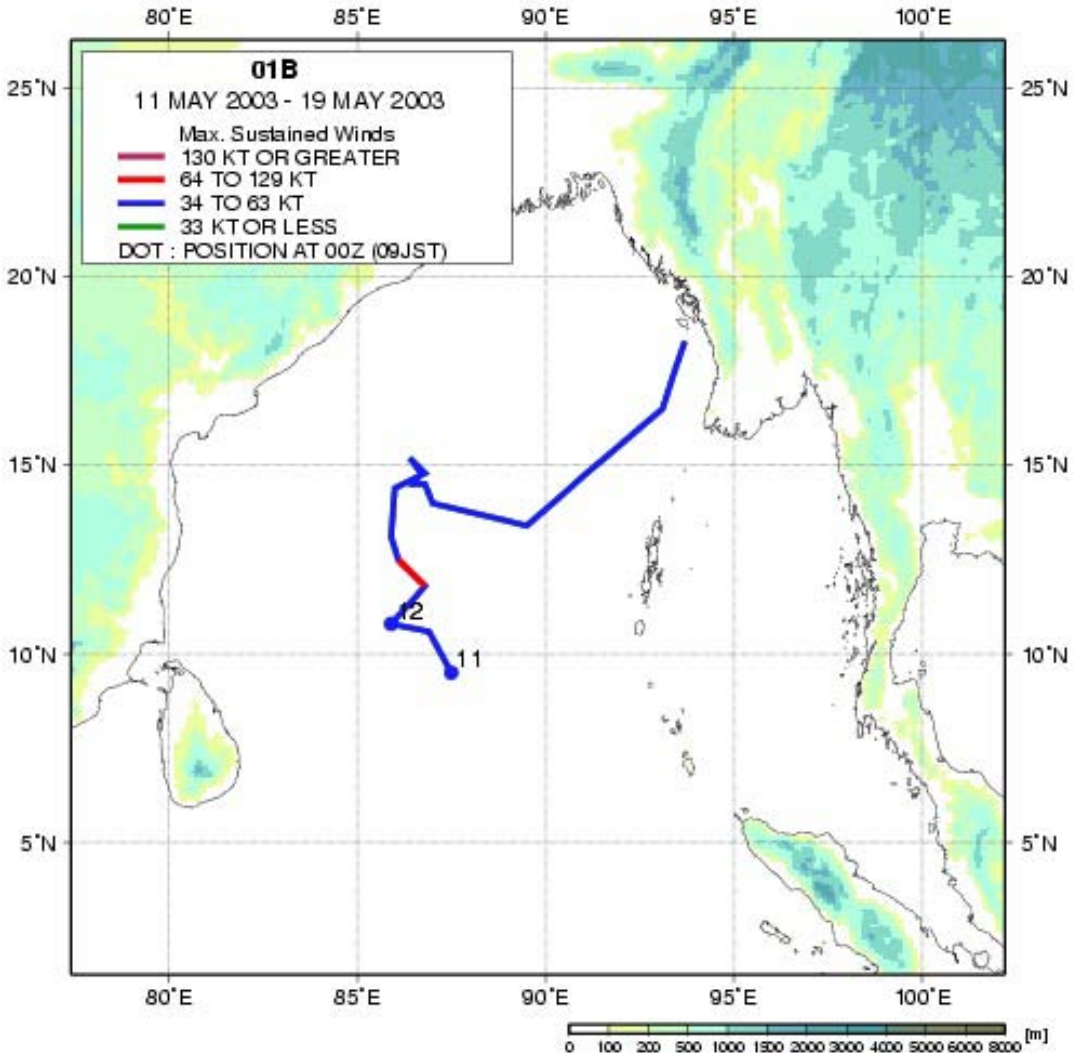


Figure 7 Course of the Cyclone affected to May 2003 Storm in Sri Lanka

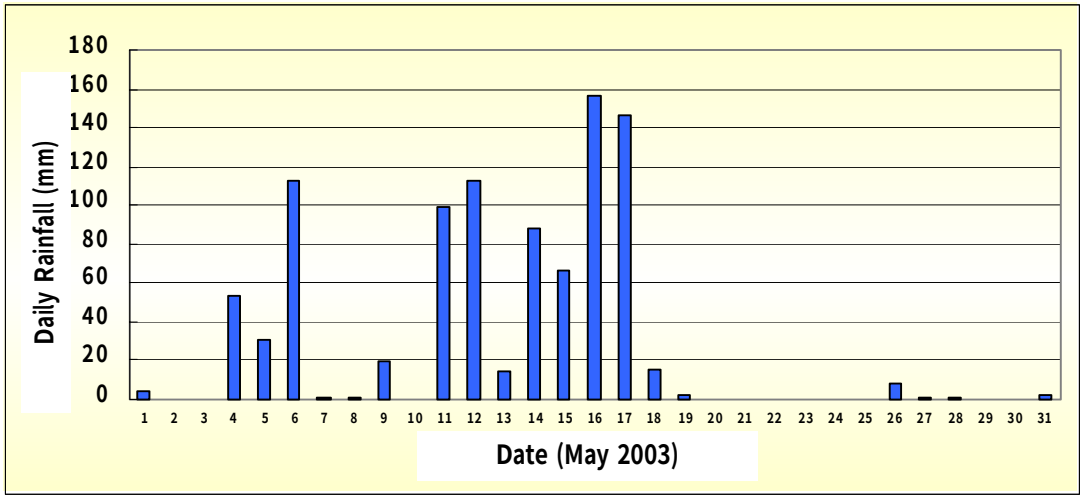


Figure 8 Daily Rainfall May 2003 in Ratunapura

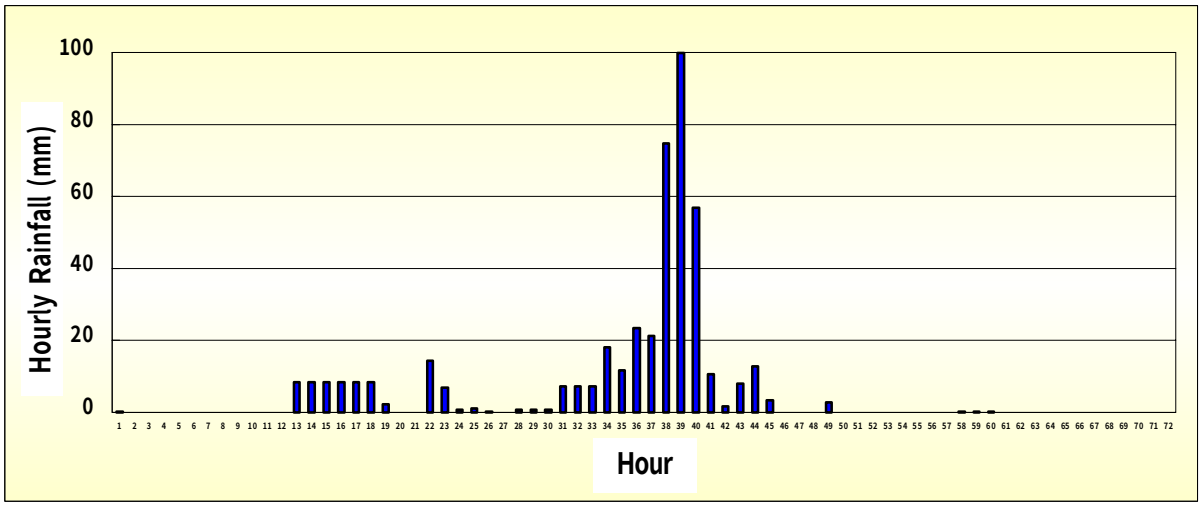


Figure 9 Hourly Rainfall in Ratunapura (16th May 0:00 to 18th May 0:00, 72 hours)

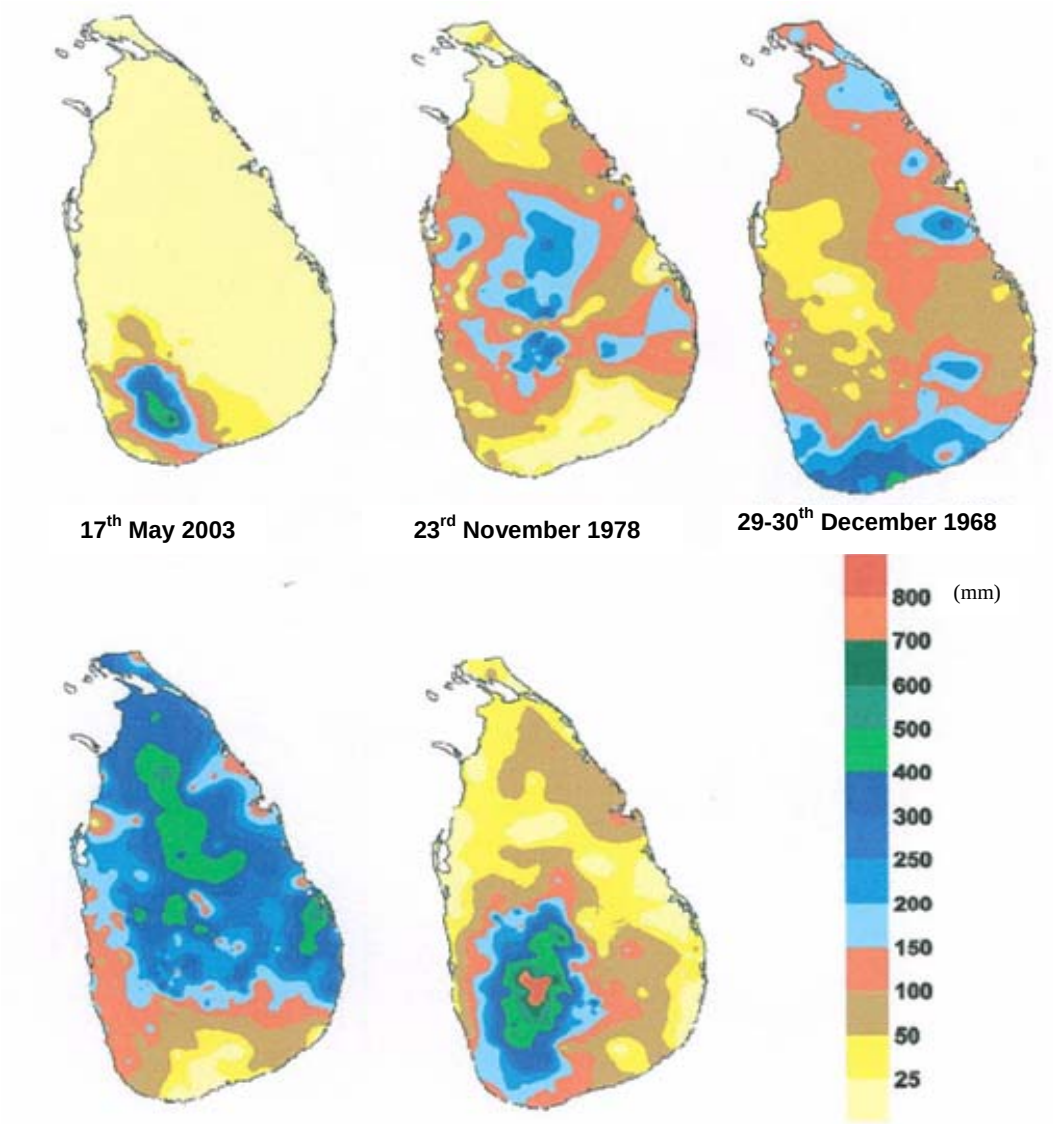
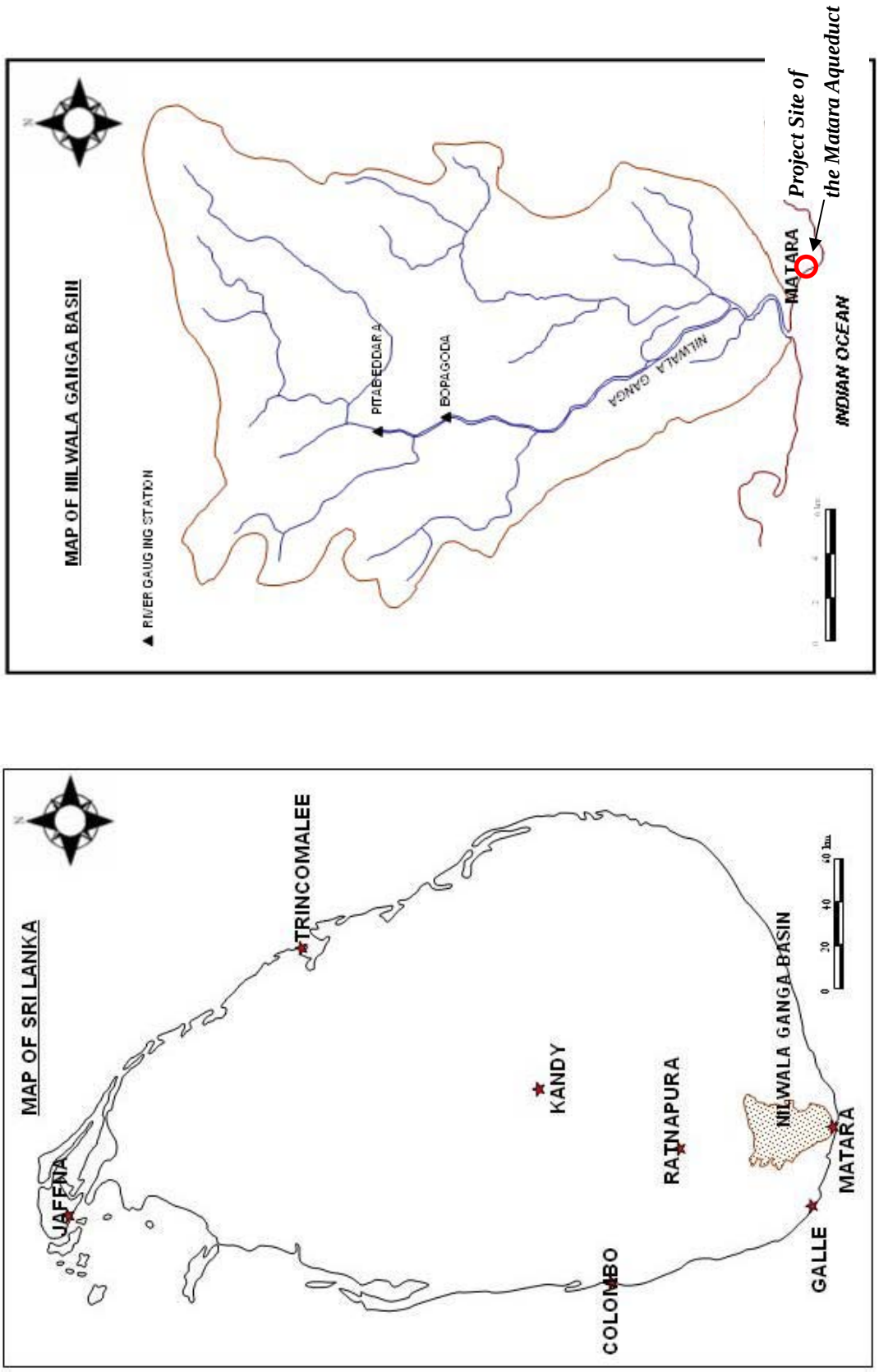


Figure 10 Comparison among Rainfall in Past Historical Storm in Sri Lanka (Chandrapala[4])



Source: Report on Flood Damage on May 2003 in Sri Lanka, September 2004, Japan Civil Engineering Society

Figure 11 Location of Nilwala Ganga River Basin (1,070 km^2) and Matara Aqueduct

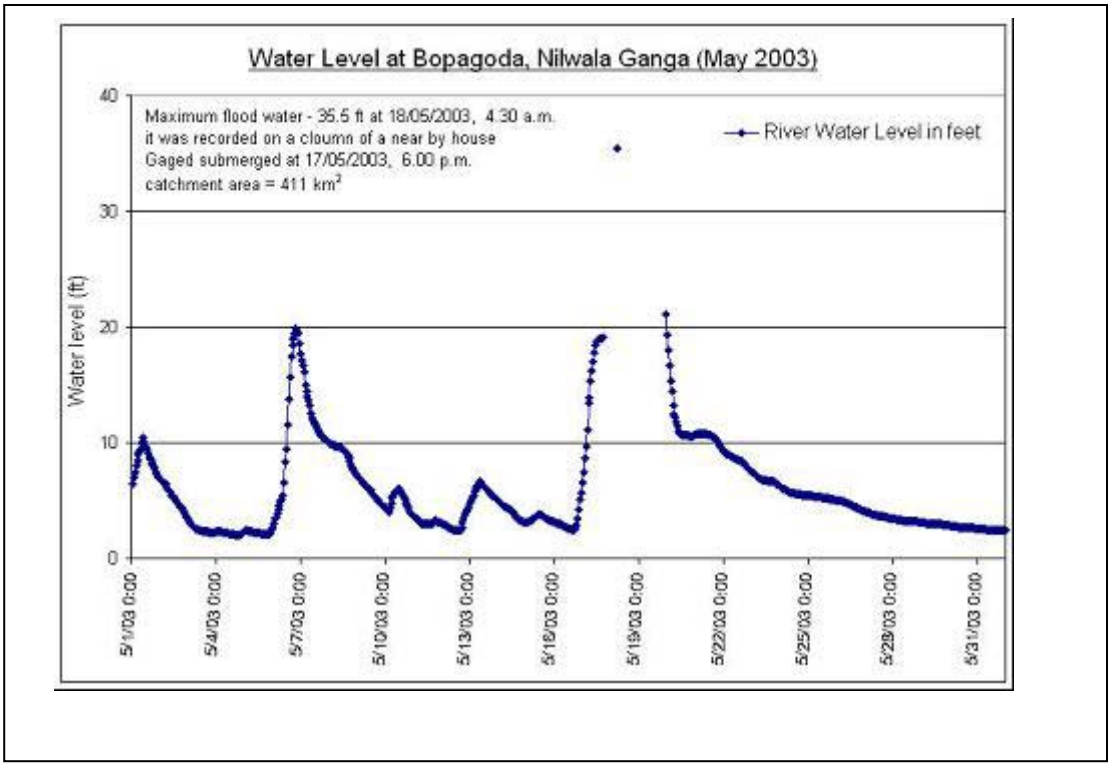
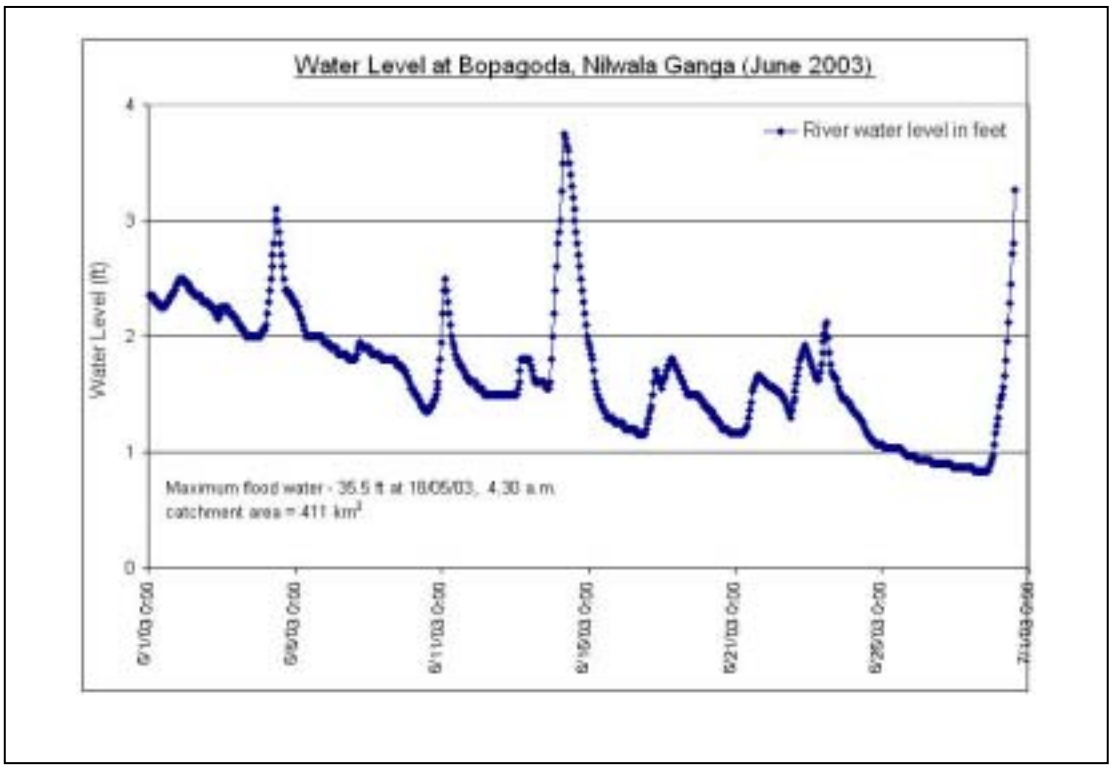


Figure 12 Water Level in May 2003 at Bopagoda



Source: Report on Flood Damage on May 2003 in Sri Lanka, September 2004, Japan Civil Engineering Society

Figure 13 Water Level in June 2003 at Bopagoda

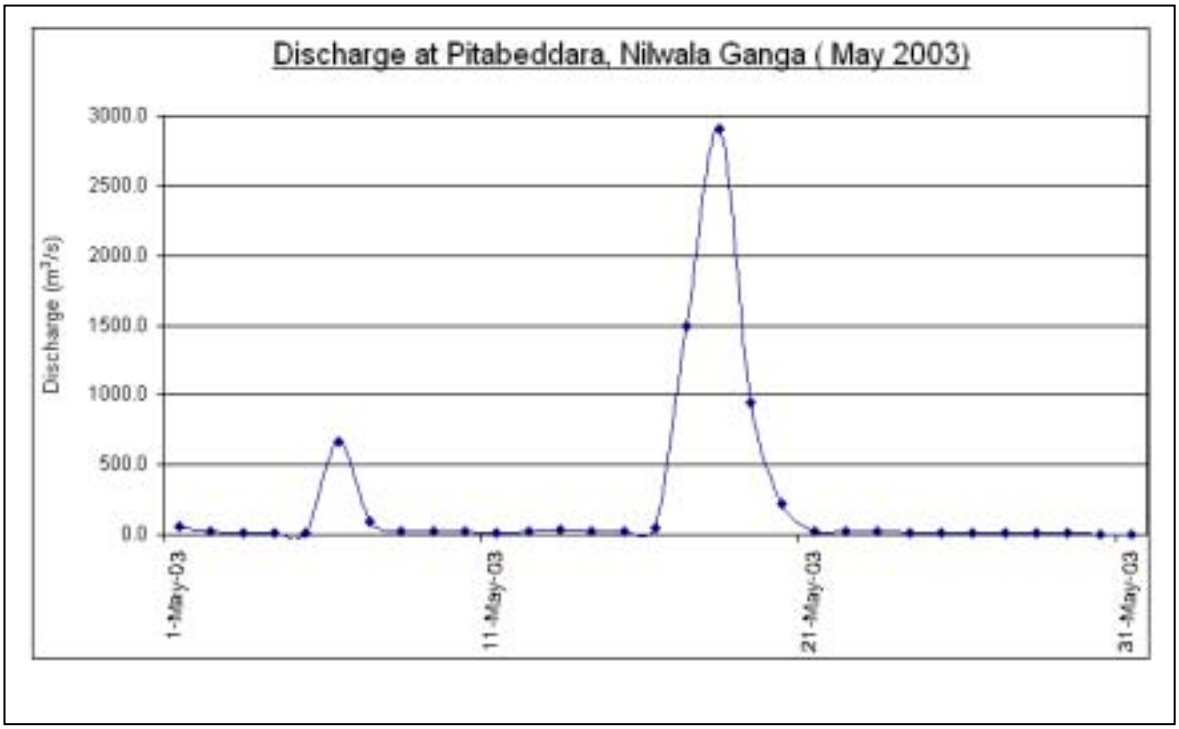
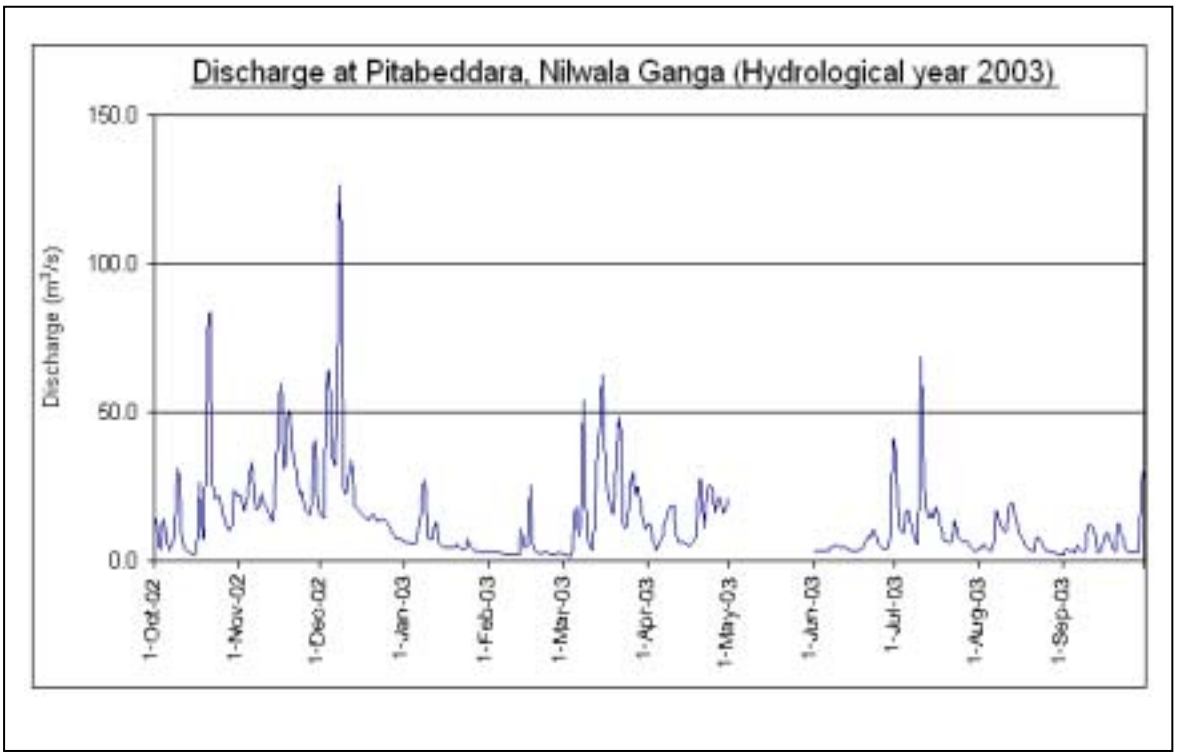
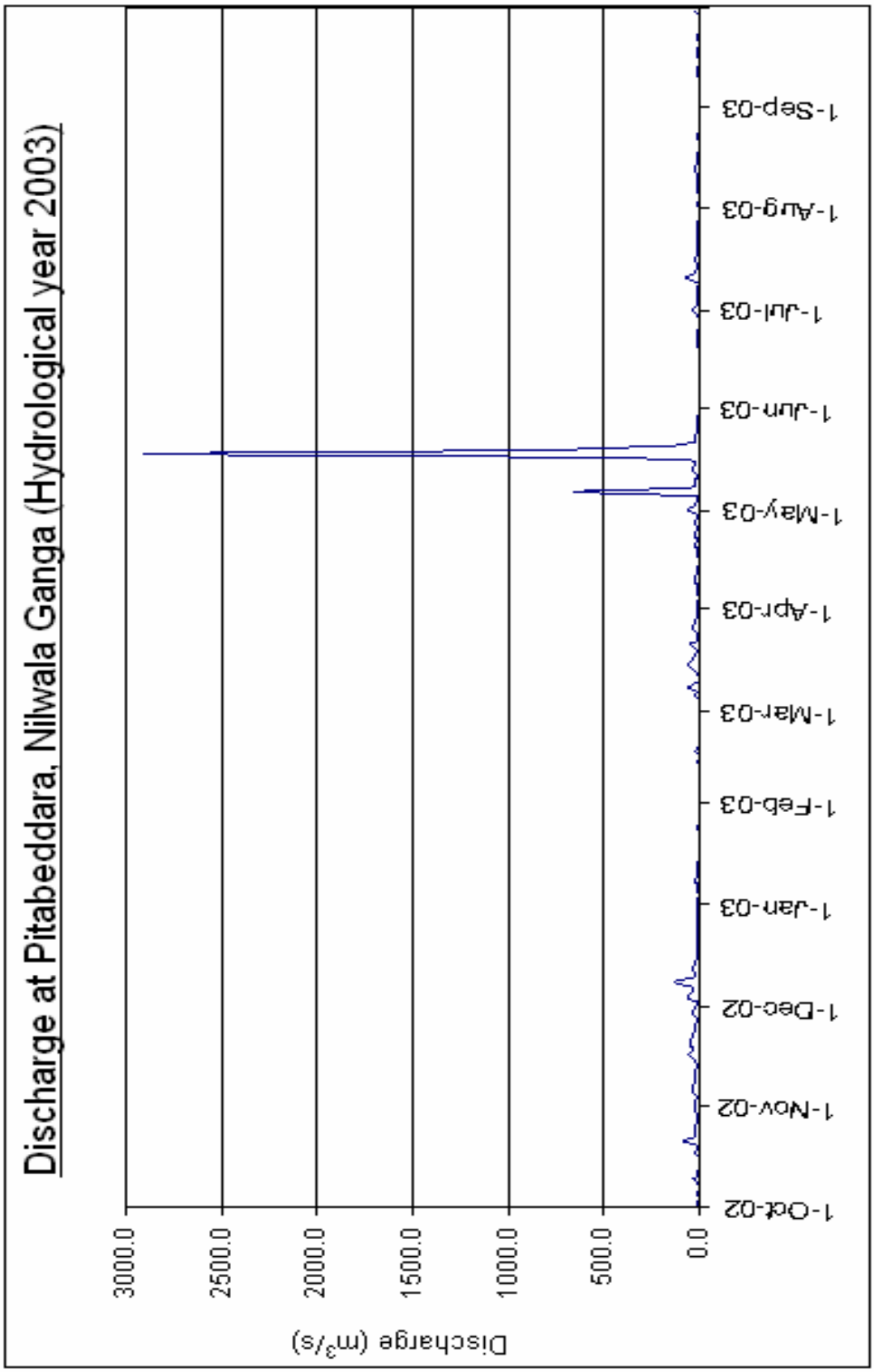


Figure 14 Flood Discharge Record on May 2003 at Pitabeddara



Source: Report on Flood Damage on May 2003 in Sri Lanka, September 2004, Japan Civil Engineering Society

Figure 15 Annual Discharge Record from 2002 to 2003 at Pitabeddara



Source: Report on Flood Damage on May 2003 in Sri Lanka, September 2004, Japan Civil Engineering Society

Figure 16 Annual Discharge Record from 2002 to 2003 at Pitabeddara

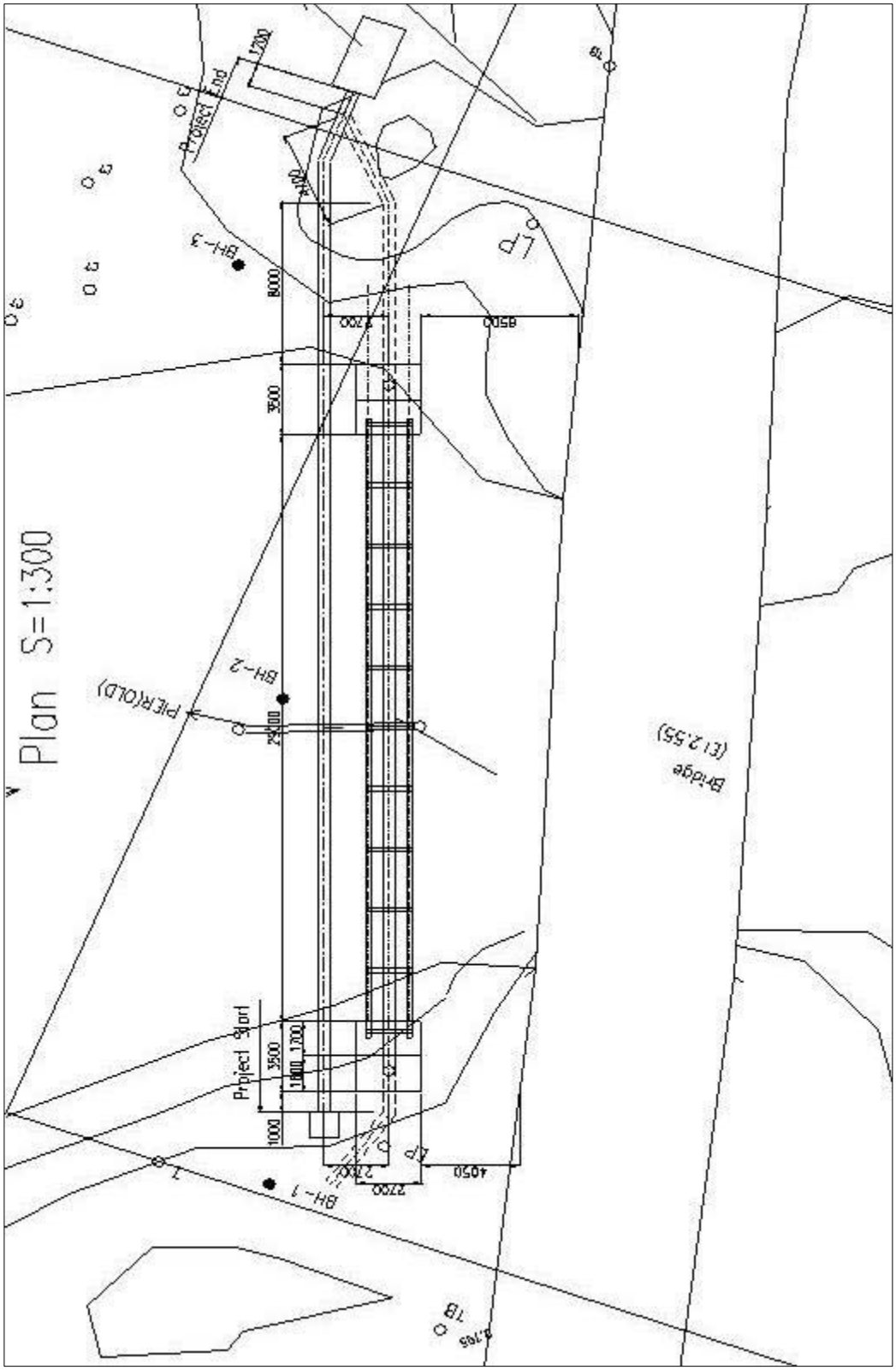


Figure 17 Topographic Survey / Mapping Results (Plan of the Site, Scale 1/ 200) with Proposed Matara Aqueduct

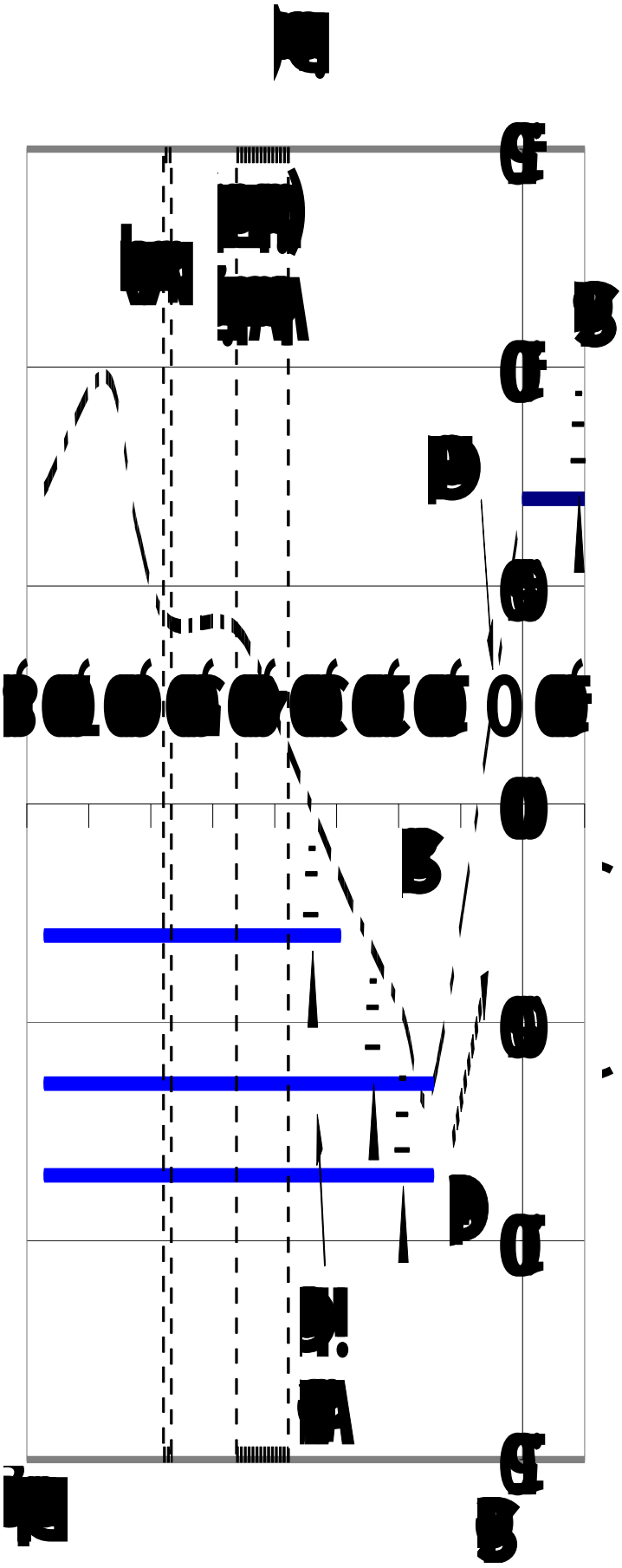
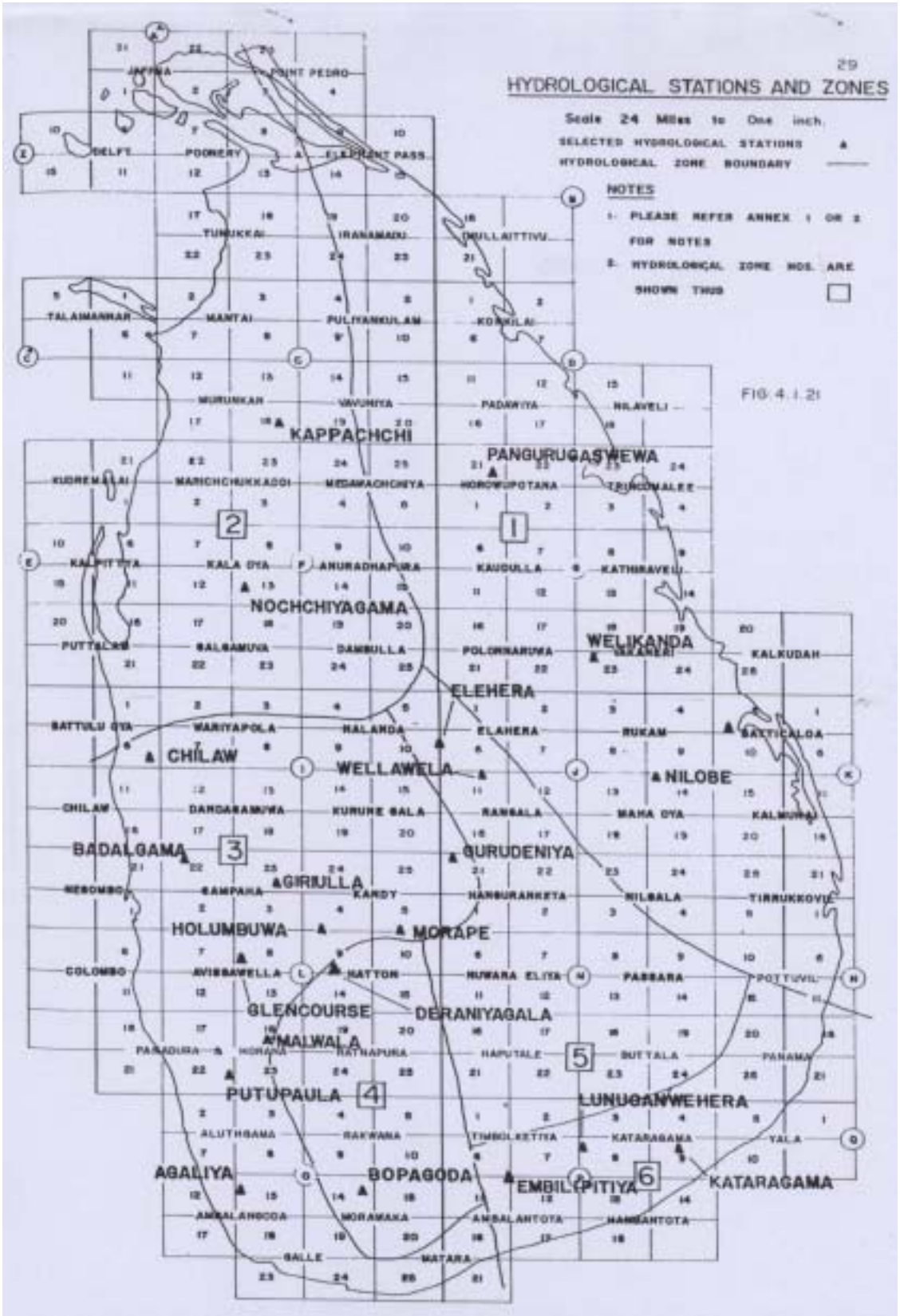


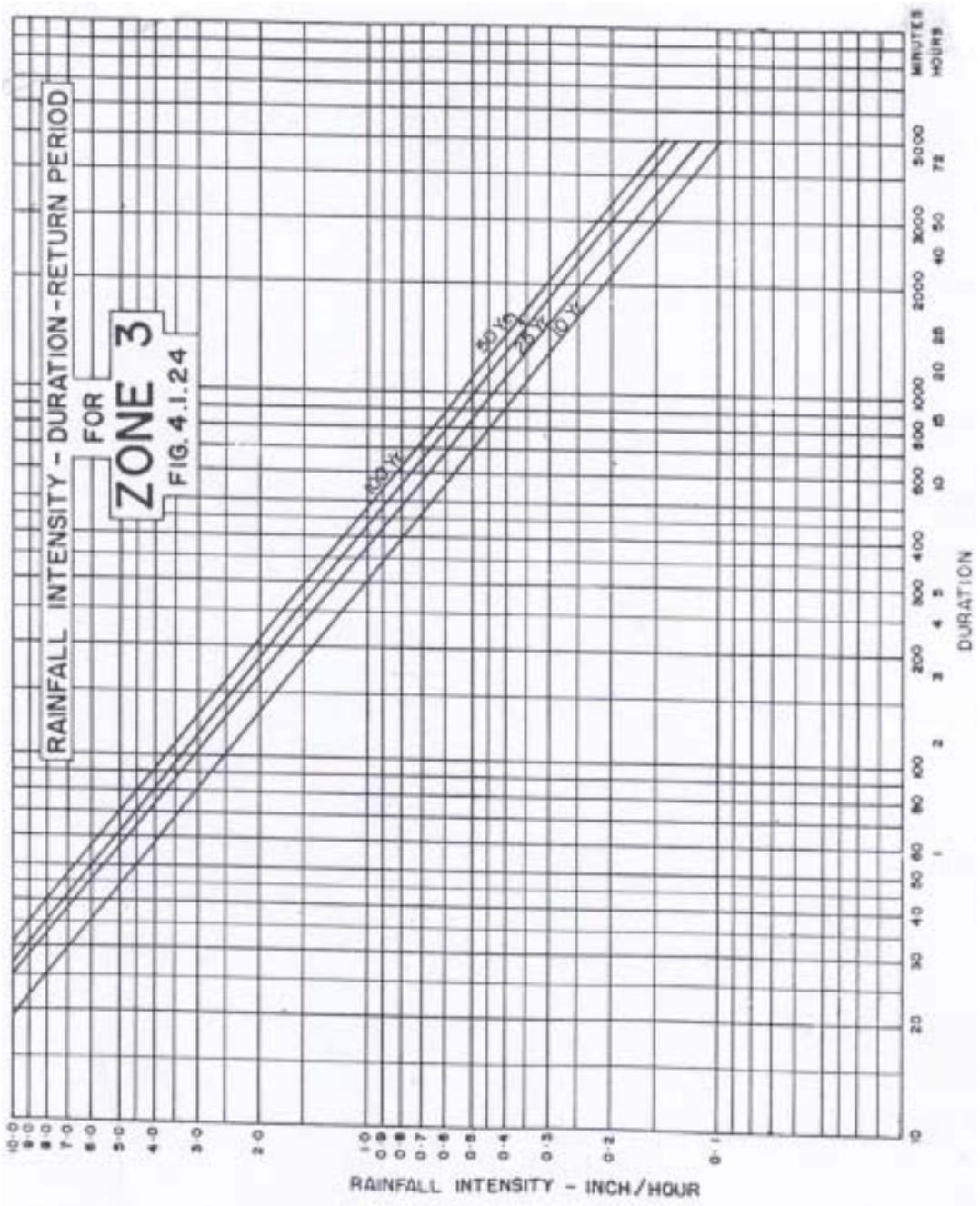
Figure 18 Channel Bed Profile and Water Flow Mechanism of the Dondra Lagoon Channel

Figure 19 Matara Aqueduct Site Location Map on 1/ 50,000 scale Map of Survey Department



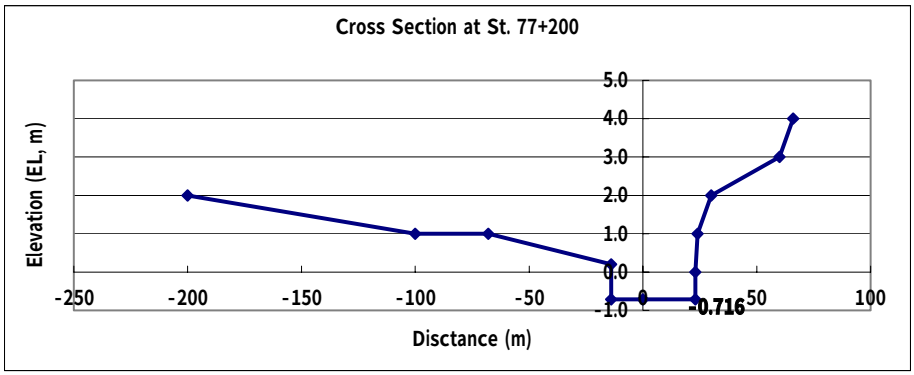
Source: Design of Irrigation Headworks for Small Catchmens 1984, Irrigation Department

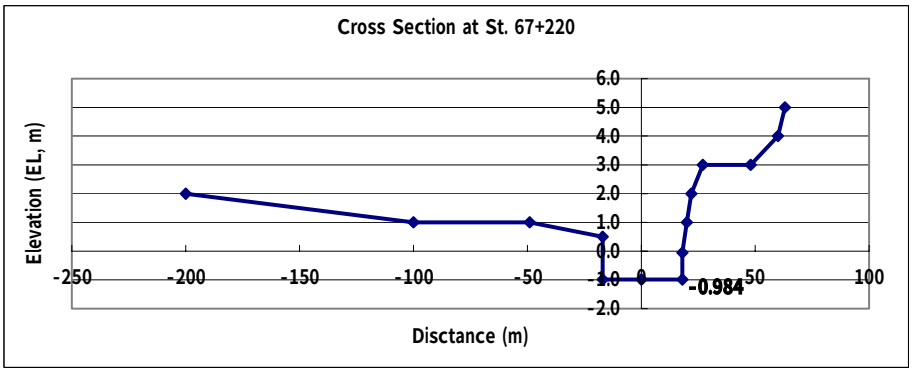
Figure 20 Hydrological Stations and Zones

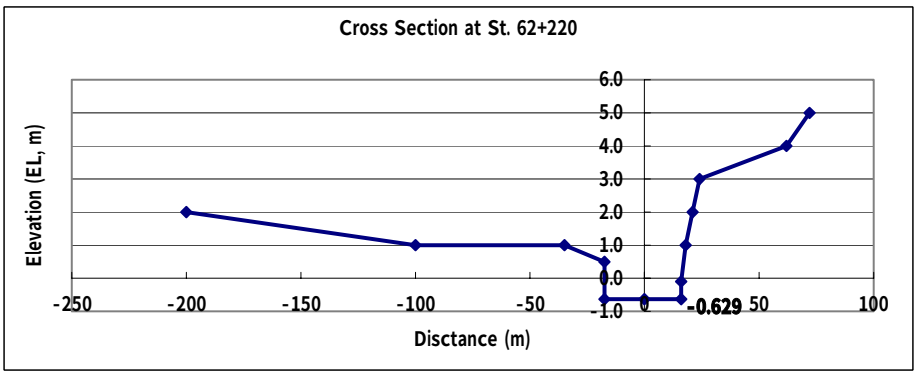


Source: Design of Irrigation Headworks for Small Catchmens 1984, Irrigation Department

Figure 21 Rainfall Intensity - Duration - Return Period for ZONE 3







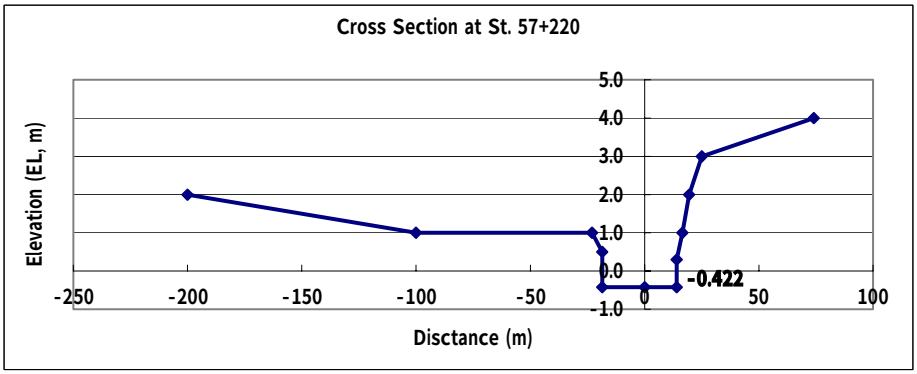


Figure 22 Cross Section of the Dondra Lagoon Channel (1/3)

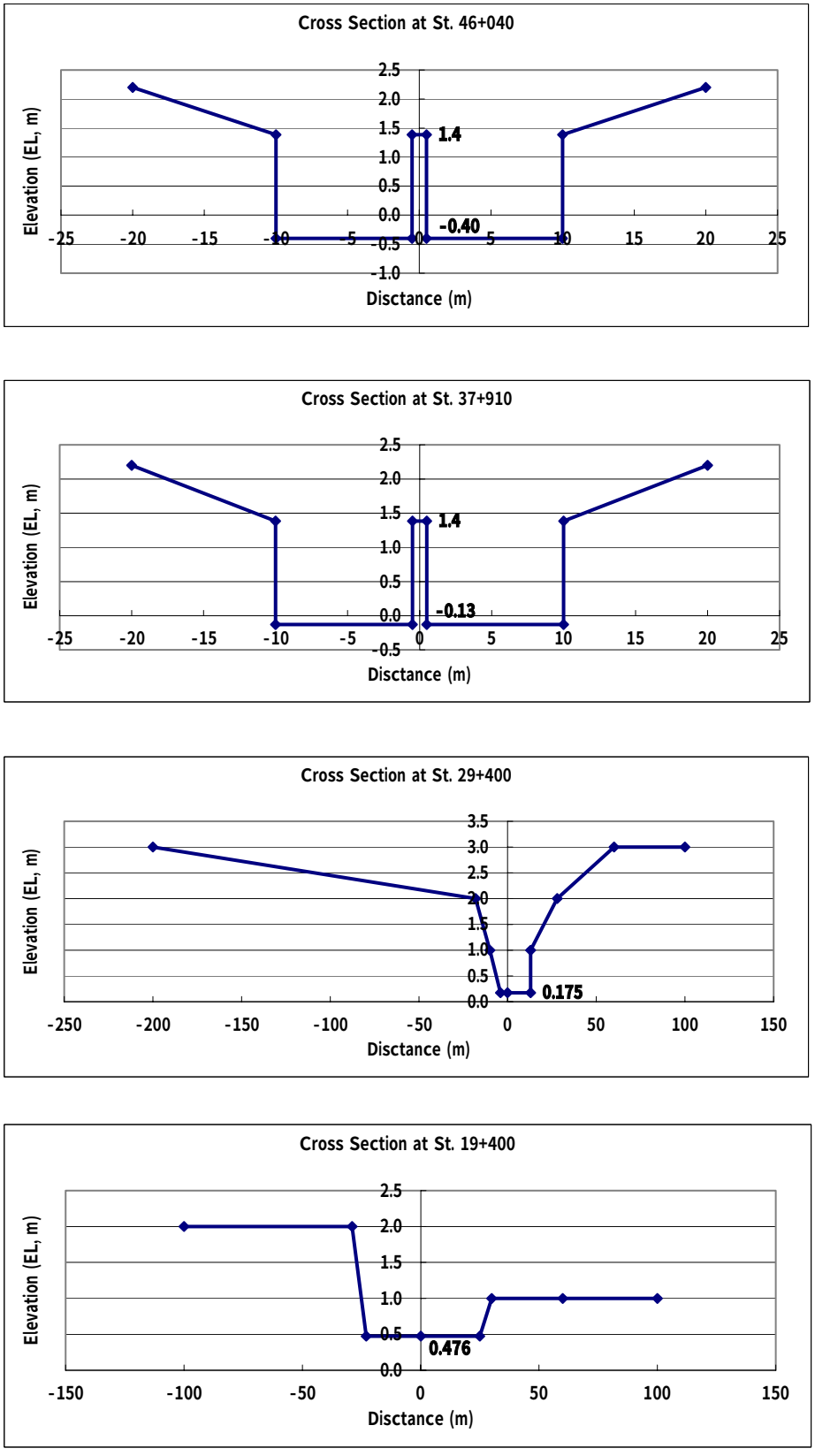
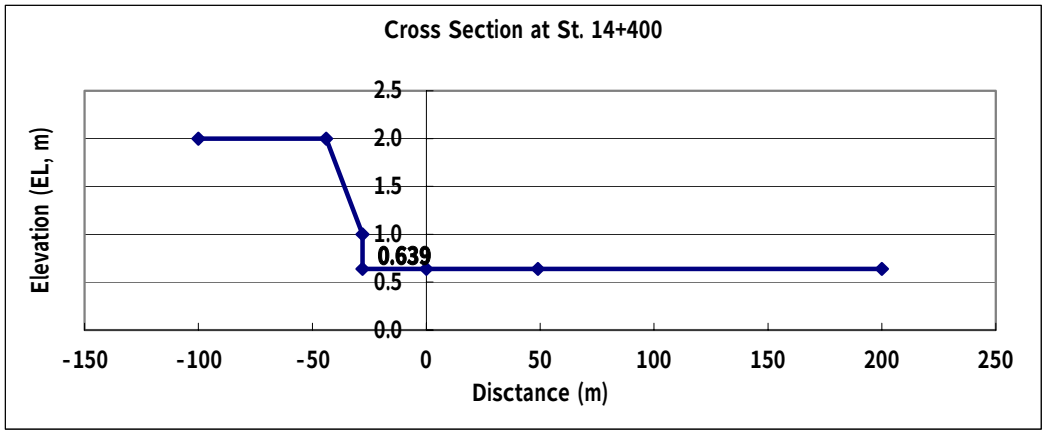


Figure 22 Cross Section of the Dondra Lagoon Channel (2/3)



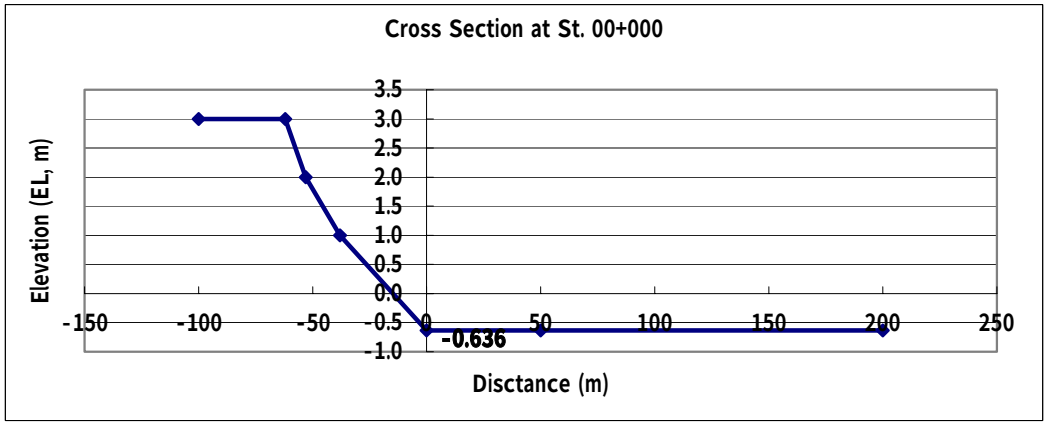


Figure 22 Cross Section of the Dondra Lagoon Channel (3/3)

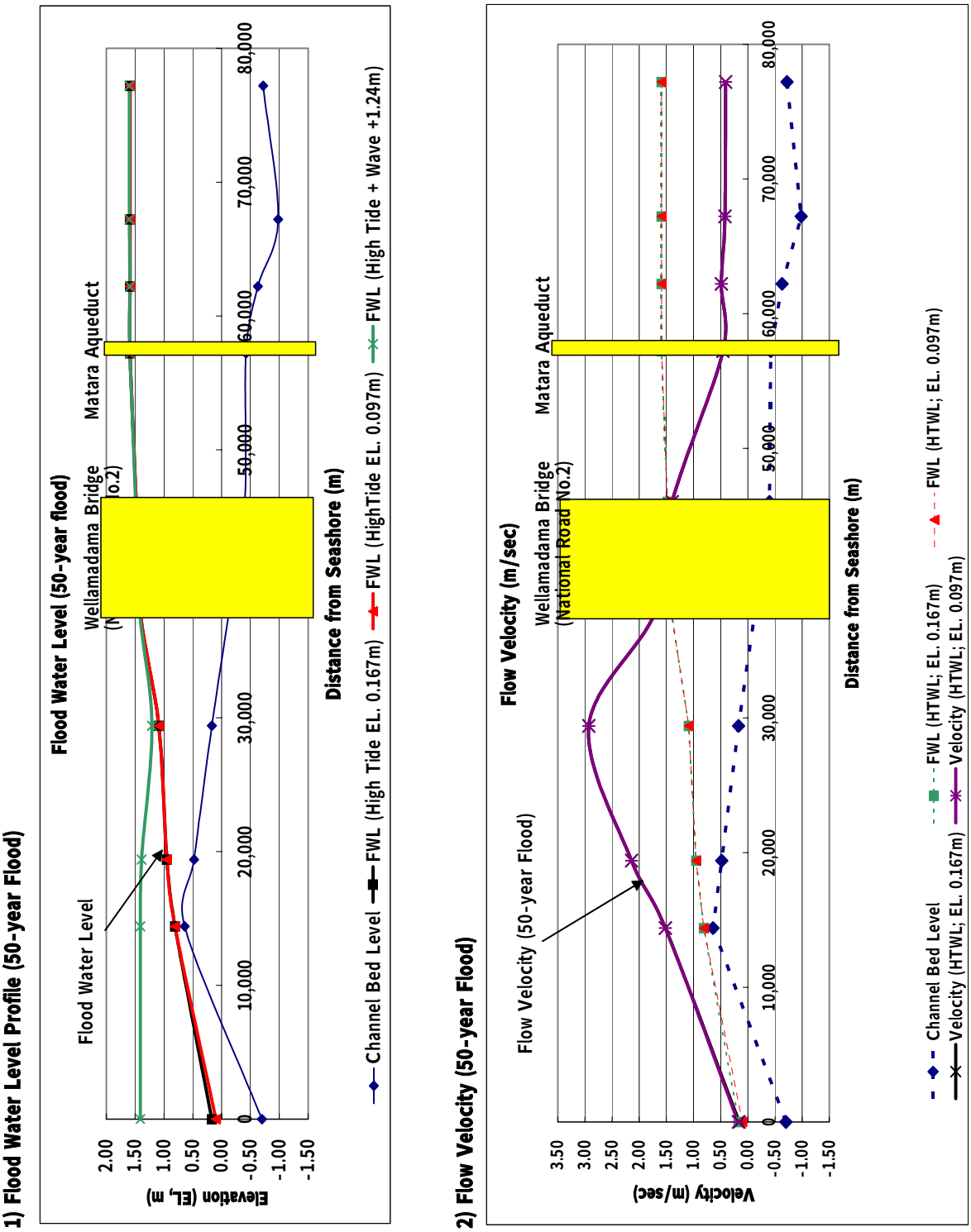


Figure 23 Profile of Flood Water Level and Flow Velocity in the DondraLagoon Channel (50-year Flood)

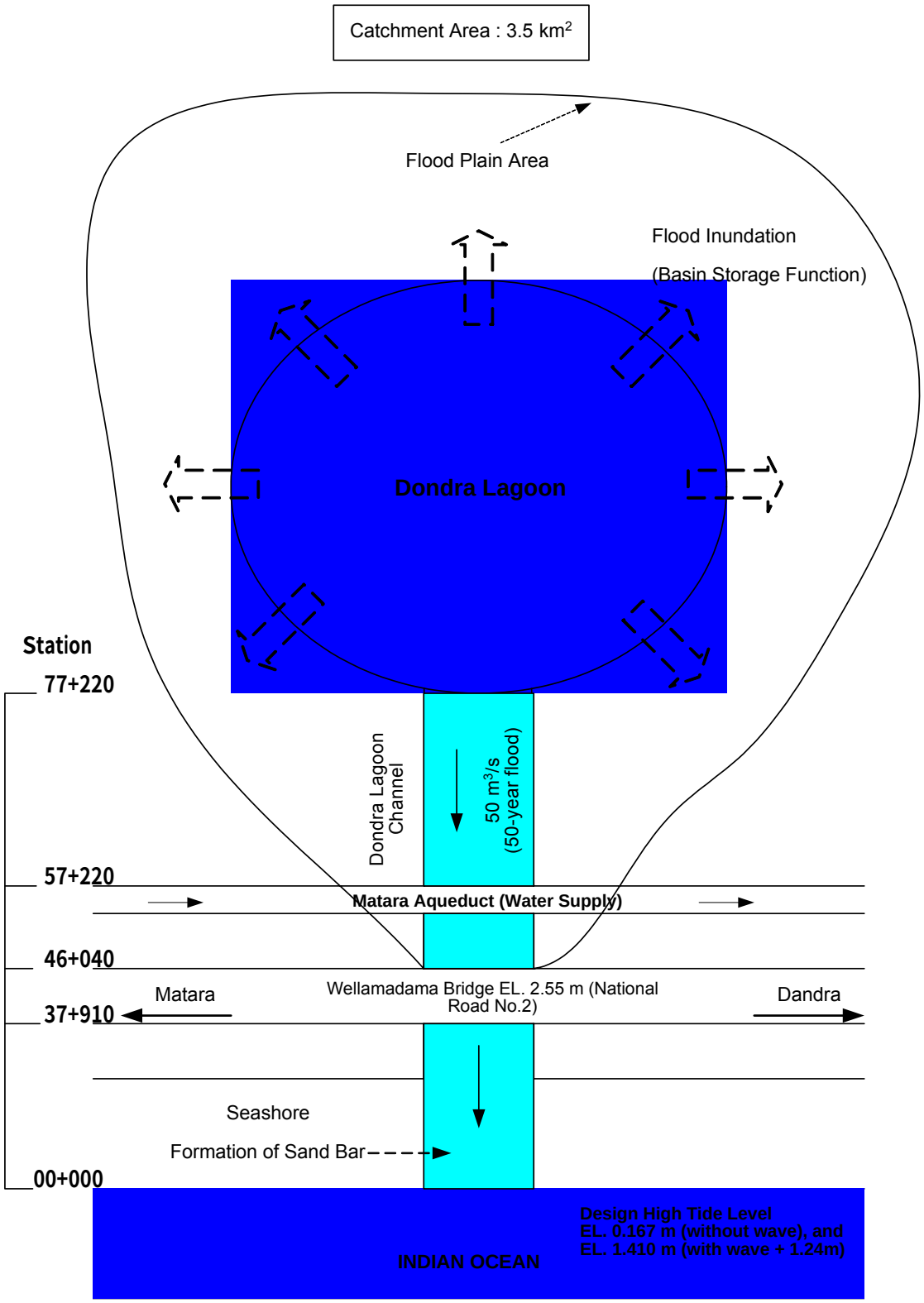


Figure 24 Dondra Lagoon Basin Water Flow System

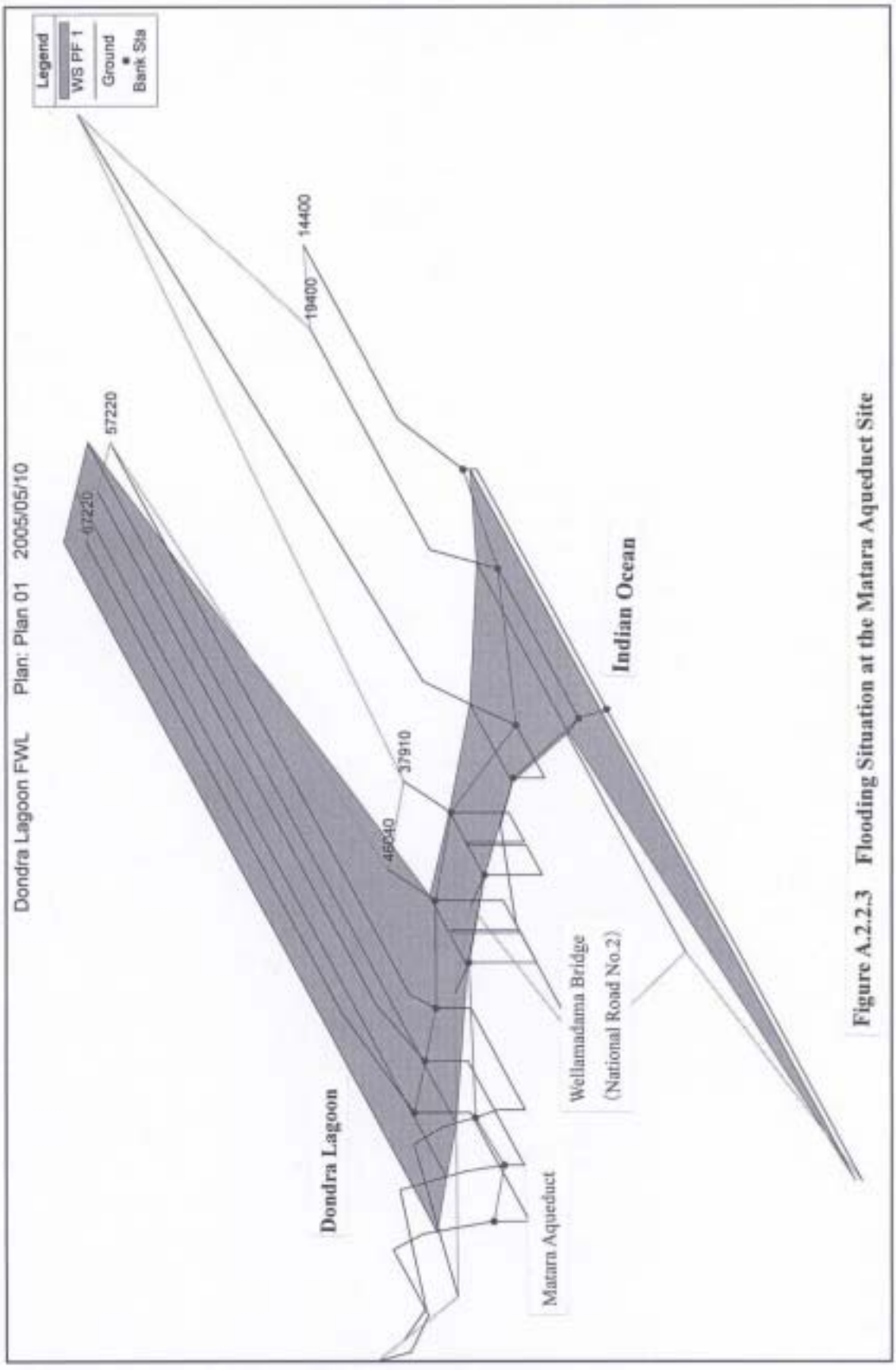


Figure 25 Flooding Situation at the Matara Aqueduct Site

5 Photographs

Photo-1: Dondra Lagoon, upstream view from Wellamadama Bridge

Photo-2: Dondra Lagoon, upstream view from Wellamadama Bridge

Photo-3: Left Abut of Wellamadama Bridge, view from downstream

Photo-4: Wellamadama Bridge and Temporary Aqueduct, view from left bank

Photo-5: Left bank of immediate upstream of the Matara Aqueduct

Photo-6: Dondra Lagoon, view from upstream of the Basin

Photo-7: Dondra Lagoon, Paddy Field

Photo-8: Wellamadama Bridge (National Road No.2) and Seashore

Photo-9: Downstream Ending Point, Seashore of Indian Ocean