

4 PRIORITY PROGRAMMES

4.1 Composition of Priority Programmes

This Master Plan provides 15 priority programmes in order to achieve basic concepts and development strategies. Composition of the programmes and their relation to the development strategies are shown in the table below.

Priority Programmes and Development Strategies in Master Plan

Priority Programmes	Development Strategies																								
	Basic Concept 1: Stable Supply of Fish for Domestic Consumption	Strengthening Fisheries Cooperatives/Organizations	Improvement of Fishing Technologies and Extension	Reduction of Post Harvest Losses and Promotion of the Fish Utilization by Shifting from New-Seed to Food Purposes	Reduction of Marketing Costs and Development of Fish Distribution System	Implementation of Feasibility Study on Aquaculture and Establishment of a Development Model	Basic Concept 2: Sustainable Use of Fishery Resources	Strengthening of Fishers Organizations for Resource Co-management	Purification of Fisheries Statistics (1997) and Preparation of Effective Data Processing System	Implementation of Measures on Fisheries Activities and Collection of Biological Information on Catches at Major Landing Sites	Basic Concept 3: Sustainable Development of Fish Exports	Implementation of Market Survey on Tanzanian Fish Product	Strengthening of the Competitiveness of Export Product by Improving Quality Control Capabilities	Basic Concept 4: Reduction of Poverty and Improvement of the Livelihoods of the Fisheries Communities	Forming of Fisheries Community Organization and Improvement of Institutional Capabilities of Fishing Villages	Mobilization of the Economic Activities of Fishing Villages	Women's Economic Activities Encouragement	Social Infrastructure Improvement in Communities	Basic Concept 5: Efficient Administrative Services and Financial Management	Improvement of Training and Extension Services by Rehabilitation of Fisheries Training Institutes	Strengthening of Experimental Study Facilities and Technological Development at Training Institutions	Establishment of Fisheries Development Fund	Multi-sectoral Cooperation Promotion at District Level	Construction of New Fisheries Division Headquarters Building	
1 Marine Fisheries Sub-sector Capacity Building Programme	●	●			●																				
2 Dar es Salaam Fisheries Infrastructure Improvement Programme	●			○																					
3 Lake Victoria Fisheries Sub-sector Capacity Building Programme	●	●	●																						
4 Lake Victoria Fish Marketing Improvement Programme	●	○			■	■																			
5 Lake Tanganyika Dagua Fisheries Development Programme	●		●		■																				
6 Lake Nyasa Planked Canoe Extension Programme	●		●												●										
7 Aquaculture Extension Programme	●				●																				
8 Fisheries Financial Support Programme	●																		●				●		
9 Fisheries Co-management Programme							●	●																●	
10 National Fish Export Promotion Programme											●	●	■												
11 Lake Victoria Major Landing Beach Improvement Programme					○						●	■	●	●	●										
12 Fisheries Communities Development Programme		●												●	●	●	●	●							
13 Fisheries Information System Improvement Programme						●		●	●										●				●	●	
14 Fishing Training Institute Improvement Programme																			●	■	●				
15 Fisheries Master Plan Implementation Training Programme																			●	●			●		

- Soft component such as technical support (● direct impact, ○ indirect impact)
- Hard component such as building infrastructure and providing equipment

4.2 Priority Programmes

Programme 1: Marine Fisheries Sub-sector Capacity Building Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption

- To demonstrate that fishers' incomes can be raised through formation of joint fishing and marketing groups and cooperatives.
- To establish models of cooperatives by providing technical and financial supports to advance fishers groups/ cooperatives.
- To encourage joint marketing of fish by groups and cooperatives and as a means of stabilizing fish prices for the benefits of both fishers and consumers

B Brief Description

Project site :Dar es Salaam, Mafia and Bagamoyo (1st phase)

Duration :24 month (1st phase)

Project cost :US\$2,970,433

This programme aims at raising fishers' capacity in fishing and marketing through supporting and strengthening fishers groups/ cooperatives.

The programme will consist of three components; (a) Strengthening fishers groups/cooperatives: This component is for fostering and strengthening fishers groups/cooperatives with education, production means and credits support. (b) Field training on fishing technique (OJT): This component is for assisting young fishers to acquire fishing techniques in the traditional training system with a fishing boat which will be consigned to the fishers group for training purpose to be introduced. (c) Promotion of marketing: This component intends to establish marketing with joint shipment by cooperation of the fishers groups.

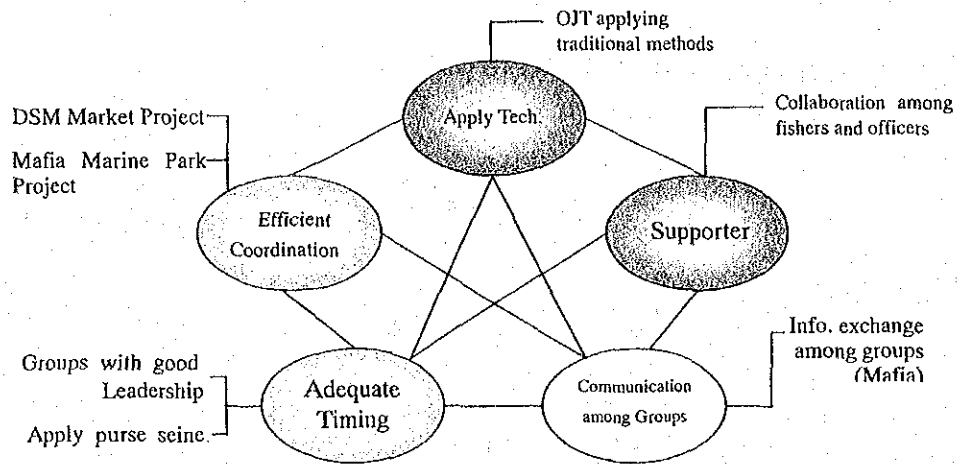
For the first phase, Dar es Salaam, Mafia and Bagamoyo are the target areas for the reason that Dar es Salaam has the largest population and demands for fish in the country and the biggest fishing fleet. Mafia and Bagamoyo are major fishing grounds near Dar es Salaam.

In the second phase, the southern areas (Mtwara and Lindi Region) will be the target areas because of their least development in fishery and remote areas from the Dar es Salaam market.

C Condition for Implementation

The existing cooperatives are highly motivated and a high implementation ratio is anticipated. Their joint retail activities face very minimal risk since the group is located in the consumption area, Dar es Salaam. Direct supervision from the Fisheries Division headquarters is possible and there is access to technicians in Dar es Salaam.

The Dar es Salaam new fish market (Banda beach market) shall be effectively utilized in this programme, in terms of providing the training service, office for cooperatives, storage of fish etc.



Key Factors of the Programme for Promotion of Group Organisation

Programme 2: Dar es Salaam Fisheries Infrastructure Improvement Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption

- To improve the facilities and functions in Dar es Salaam to act as the centre of fishery production and marketing in the marine coastal regions and to lead the coastal fisheries of Tanzania.

B Brief Description

Project site :Dar es Salaam, Banda Beach, Kivukoni Front

Duration :24 month

Project cost :US\$ 3,634,931

This programme aims to promote the fisheries sector of the country, by expanding and improving the facilities and functions in Dar es Salaam, to serve as the centre area for promotion of the fishery sector. In order to improve and promote marketing of fish, the new fish-market has been constructed in Dar es Salaam in 2002. This new market is however not enough to accept more fish from various production sites and store it. Additional facilities are required in adjacent area of the new market. Facilities and functions supporting fishers and operation of fishing boats are also required in Dar es Salaam in connection with the fish-marketing area. Including improvement of these issues, this programme intends to develop the areas in Banda beach and Kivukoni Front to serve as a fishery centre for leading promotion of the fishery sector. The programme consist of the following components:

1) Expansion of fish market

The expansion of the market facilities will include ice plant, cold storage, new commercial zone composed of restaurant and shops, which are especially provided for the people who cannot be accommodate in the new fish market. The old fish market building (auction hall) will be utilized for fishery cooperatives rooms, meeting/training rooms and engine-repairing workshop.

2) Improvement of the mooring area in Kivukoni Front

The shore area in Kivukoni Front, which has been utilized as the main mooring area of Dar es Salaam fishing boats, will be improved so as to support the fishers' activities and operation of fishing boats and secure safety mooring area as well as clean/ hygienic working areas for the people. The area will also be provided with fishing gear storage, toilet and workshops.

C Condition for Implementation

The programme includes the expansion of the Dar es Salaam fish market. The market is presently under construction. The appropriateness of the programme's effectiveness and management capabilities will be confirmed before it is implemented.

Project for Dar es Salaam Fisheries Infrastructure Improvement Programme

Perspective of extension site



Programme 3: Lake Victoria Fisheries Sub-sector Capacity Building Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption

- To develop and to extend low cost and effective fishing technology
- To examine the FRP boat building technology to reduce pressure on forest resources

B Brief Description

Project site :Nyegezi Freshwater Fisheries Training Institute (phase 1)

Duration :12 month (phase 1)

Project cost :US\$ 252,757

This programme aims at upgrading the standard of living for fishers by improvement in fishing technique and fishing household management technique. For fishing technique, it is considered to introduce small echo-sounder and other fishing technique that are presently not used in the lake, and modify Dagaah hurry-up net to purse-seine net. Prior to the introduction, Nyegezi Freshwater Fisheries Training Institute will verify the cost performance of said technique (phase 1). And after the verification, together with the basic know-how such as assembly and repair of fishing gears, handling of fish, concept of fishery cooperative, money management and resource management, training and education service will be extended to the fishers at village (phase 2).

Moreover, the technical and financial possibility of FRP boat for small-scale fishing will also be examined in phase 1. With the assistance of foreign expert, Nyegezi Freshwater Fisheries Training Institute, with their technical personnel and know-how will develop the locally fitted proto-type boat and monitor its working condition in collaboration with some fishers.

C Condition for Implementation

Technical development of the Nyegezi Freshwater Fisheries Training Institute should wait until the renovations implemented under this programme have been completed.

Programme 4: Lake Victoria Fish Marketing Improvement Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption

- To improve Kirumba fish market, which is the centre of Dagaa trading, in order to promote Dagaa marketing nation wide.
- To provide appropriate facilities to the three small-scale processing area which handle left-over from the Nile perch factories in order to utilize these materials efficiently for human consumption.

B Brief Description

Project site :Kirumba market -Mwanza, Kanyama and Mkolani (Mwanza), Bweri (Musoma)

Duration :48 month

Project cost :US\$ 5,855,158

This programme consists of two components, marketing and processing. One is the improvement of Kirumba market in Mwanza and the other is the improvement of existing processing area for Nile perch filleting left-over in Mwanza and creation of same type of processing area in Musoma. Both components aim to contribute to the food security, job opportunity creation, and poverty alleviation through efficient use of economic resource.

The marketing component proposes construction of the wholesale facility in the existing Kirumba market, which handles the biggest amount of Dagaa but is unsanitary and inefficient. The new wholesale facility makes it possible to handle commodities rapidly in response to the demand of the market without interruption by weather and to reduce the market loss while commodities are stocked in unprotected area.

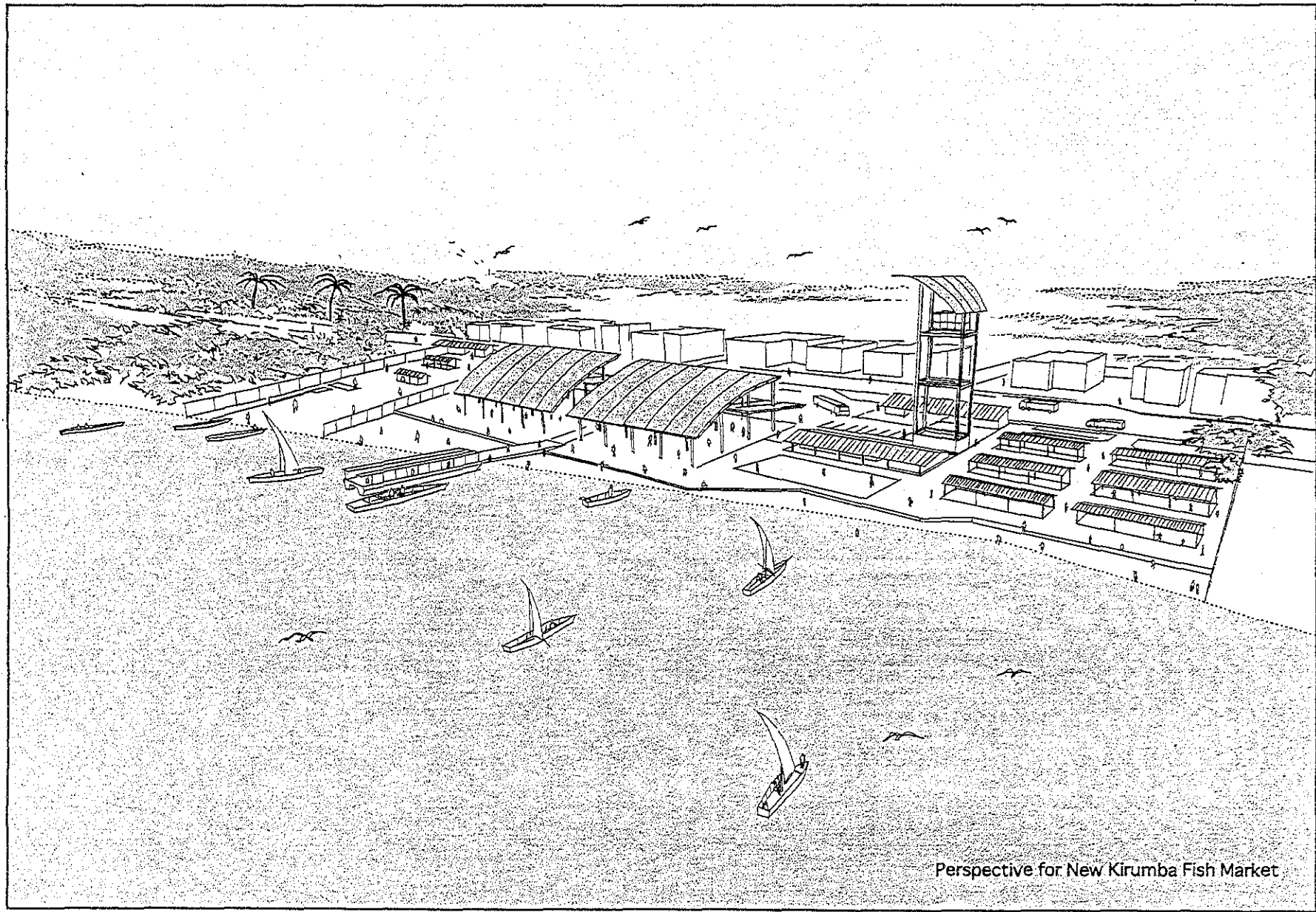
Nile perch left-over processing area component upgrades the sanitation of the processing and marketing by construction of products storage, sanitary facilities for workers, and improvement of working environment for the food processing area.

C Condition for Implementation

The small-scale processing areas and Kirumba market are presently in operation; improved facilities will contribute highly to the working environment. The market is a distribution center for dried Dagaa with an expected increased handling volume of additional 900 tons annually from implementing market improvement. An existing cooperative is managing a segment of the market and the facilities are relatively maintenance free. Therefore, a short-term programme was considered feasible.

Existing groups in Mkdani and Kanyama processing area are expected to play a management body. Two organization shall be strengthened in order to capable enough to maintain the facility.

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Perspective for New Kirumba Fish Market

Programme 5: Lake Tanganyika Dagaa Fisheries Development Programme

A Objective

[Goal] Stable Supply of Fish for Domestic Consumption

- To reduce the post harvest loss of Dagaa products especially during the rainy season.
- To develop the Dagaa processing method and facility to ensure its supply for human food.
- To enlighten to the fishers to achieve effective utilization of limited fishery resources.
- To increase fishers' net income without increasing current fishing pressure by introducing new fishing method and developing the current fishing method.

B Brief Description

Project site :Katonga and Kibilizi (Kigoma), Lake Tanganyika

Duration :24 month (phase 1)

Project cost :US\$ 132,919

This programme is focused on the promotion of Dagaa production and trading in Lake Tanganyika. Increasing Dagaa production and availability of new Dagaa products for human consumption as table fish are the targets. This programme consists of four components as follows;

Fishing aggregate light improvement component: This component aims to make high fish aggregating effect by adding the appropriate light reflection plate on the currently used pressure lamp. The light reflection plate is to concentrate the light into the water than defuse to the sides with high fish aggregating effect.

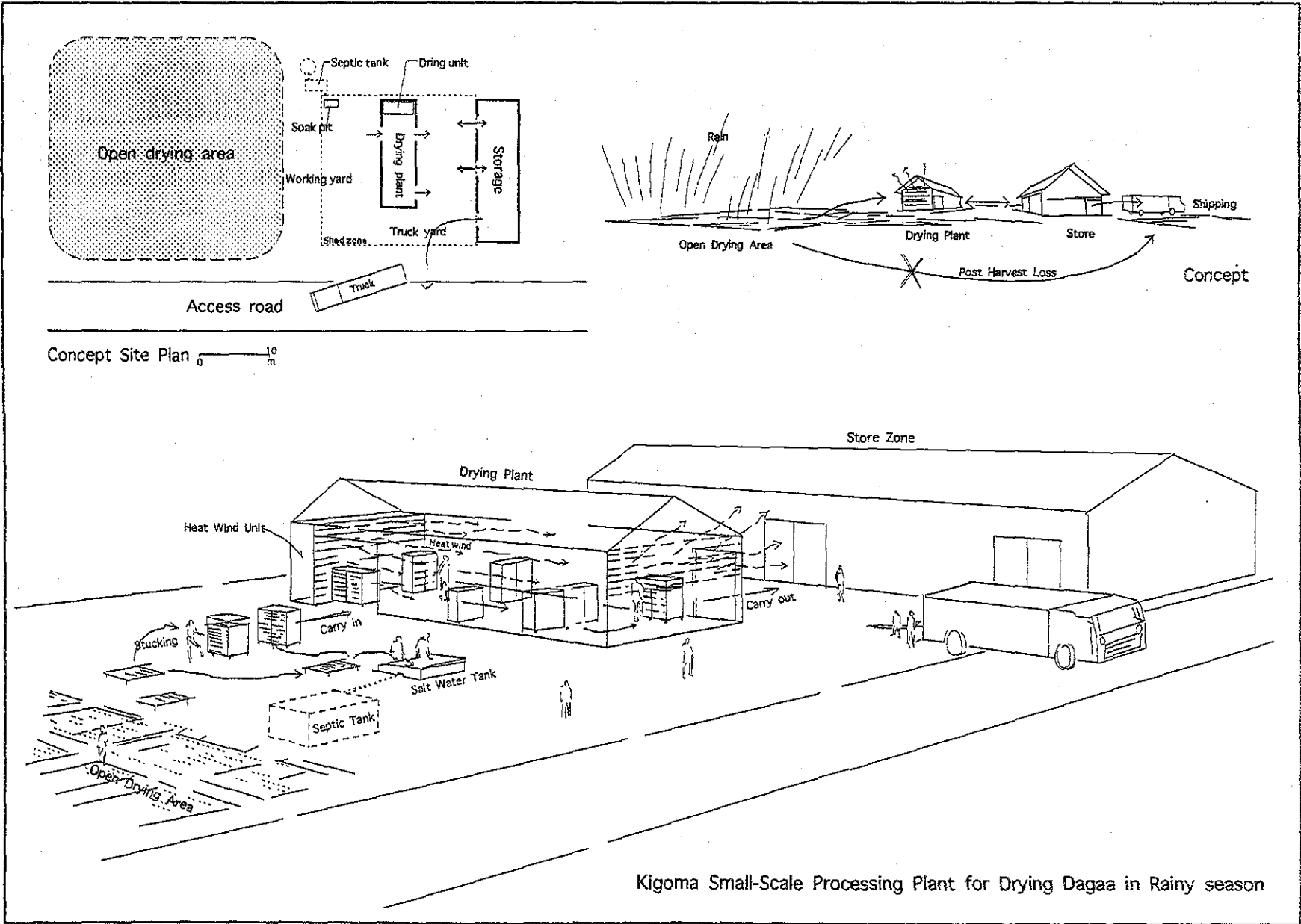
Fishing method experiment improvement component: This experiment component is to introduce the new fishing method like under water lamp, fish finder, and sonar. During the night, these equipment contribute to find the fish school easily and using the under water lamp, induce the fish school to the fish net.

Smoking Dagaa development component: This component targets to expand the diversity of Dagaa product as human food by introducing smoked Dagaa and also to activate the untapped Dagaa market and consumers. This component aims not only an experiment with new processing method but also the development of new Dagaa products.

Fish processing development component: This component aims to stabilize the Dagaa dry processing with hot air drier so as not to be affected by weather throughout the year. To dry Dagaa with hot air drier is expected to secure the food safety and contribute to the decrease in post harvest loss especially during rainy season resulting in stable and increased food supply.

C Condition for Implementation

The content of the technical improvements in the programme has been limited to simple and specific fishing (using fishing lamps) and drying methods of Dagaa, where effective input is possible. Due to the existence of an NGO to assist with technical extension activities, creating a system of cooperation to strengthen management capabilities can be easily achieved. An approach that will reduce post harvest loss of Dagaa Kigoma, an important food fish, will be studied. Since the programme will not contribute to increased fishing pressure, considerably large benefits can be derived from the programme.



Kigoma Small-Scale Processing Plant for Drying Dagua in Rainy season

Programme 6: Lake Nyasa Planked Canoe Extension Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption, Reduction of Poverty and Improvement of the Livelihood in the Fisheries Communities

- To focus on developing fishing technology especially boat operation technique and boat building material by comparison to other water bodies, which will contribute to safe and eco-friendly fishing, and will also preserve the forest resources.
- To defuse the appropriate fishery technology to the Lake Nyasa area to achieve good harmony with nature.

B Brief Description

Project site :Mbeya, Iringa, Ruvuma Region (Lake Nyasa)

Duration :36 month

Project cost :US\$ 140,614

This programme will establish the Lake Nyasa Fishery Technology Expansion Centre in Kyela to develop the fishery technology in harmony with biodiversity concept and sustainable fishery resources. This centre involves two kinds components, one is "Diffusion of planked boats component" and the other one is "Introduce the sail technology". Diffusion of planked boats component is to promote the local boat builders to convert from dugout canoes to planked boat. The sail technology component is to introduce the use of sail to the local fishers to broaden their fishing activity.

C Condition for Implementation

In terms of the fair distribution of fisheries development input, this programme targeting Lake Nyasa should be given priority. However, in view of fisher input capabilities and management skills, the impact of this programme will be lower than that of other programmes.

Programme 7: Aquaculture Extension Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption

- The volume of cultured fish will be increased, in view of the region's dependency on fish supplies from outside the region to meet the fish demand of the urban and farming communities.
- The factors that have impeded aquaculture extension activities will be pinpointed and suitable aquaculture sites in Morogoro region will be identified, a culture training model will be developed, and a strategy for culture extension activities will be formulated.
- Aquaculture data and training activities will be provided to farmers and companies engaged in culture activities. Input in the aquaculture industry will be promoted and new revenue generating opportunities will be created.

B Brief Description

Project site :Morogoro Region

Duration :36 month

Project cost :US\$ 625,600

In Tanzania where the fish supply from natural fisheries is abundant, the relative importance of a cultured fish supply is still in its intermediate stages. Under this programme, a survey will be carried out on the potential implementation of two types of culture activities at the National Aquaculture Centre in Morogoro region, i.e., commercial based culture of Tilapia (*Oreochromis niloticus*) and Catfish (*Clarias gariepinus*) and self-sustaining fish culture operations. In addition, suitable aquaculture sites in the region, culture methods, and the market will be studied. Morogoro region is located inland and its access to fish supplied by natural fisheries is limited. Therefore, the need for aquaculture development is high. In addition to the construction of the National Aquaculture Centre, FAO and SADC have implemented aquaculture extension projects in the region. However, due to the inability to secure a water source and the lack of continuous extension services, these projects have not been very successful. Past projects will be reviewed in this programme. A detailed survey will be conducted to designate water resources suitable for aquaculture, to study extension activities that are linked with the agricultural sector, and to assess the marketability of cultured fish.

C Condition for Implementation

In contrast to natural fisheries production, the production levels of aquaculture is minimal, and achieving increased production in a short period of time through aquaculture extension activities is difficult. The Tanzanian Government is presently renovating the Morogoro National Aquaculture Development Centre and the priority of this programme is to strengthen and improve the facilities and functions of this centre.

Programme 8: Fisheries Financial Support Programme

A Objectives

[Goal] Stable Supply of Fish for Domestic Consumption, Efficient Administrative and Financial Management

- To establish low interest rate credit system for artisanal fishers.

B Brief Description

Project site : Mafia (phase 1) and Kigoma (phase 2)

Duration : 48 month

Project cost : US\$ 1,225,000

There are many fishers who lack financial resources to purchase out-board engine and/or fishing gears, therefore it is needed to establish a credit system for small-scale fishing with low interest rate. But the credit scheme from foreign donations, such as Kigoma and/or Kagera Fisheries Development Programmes, were misunderstood to be a grant, and showed low repayment ratio. As a result, these credit schemes could not continue after the foreign aids stopped.

The credit system with low interest rate will enable artisanal fishers to purchase capital goods such as fishing boats, outboard engines and fishing gears. Revolving funds will be established directly between fishers' groups and district authorities. In order to keep high repayment ratio, it needs the practical know-how of NGOs. The interest rate should be set at 5%, the minimum lending rate of the Central Bank of Tanzania.

In this programme, the sustainable credit scheme combining foreign fund as a seed and "District Fisheries Development Fund" (based on fish levy) are proposed. Considering the fragile situation of local finance especially in the districts, it is necessary for Fisheries Division to assist the districts which intends to promote fisheries in their district using Fisheries Development Fund (FDF) practically as a revolving fund.

C Condition for Implementation

Based on the experience of past projects, micro projects must be closely related to the local community, and the existence of a management institution with adequate financial knowledge is essential. Criteria to select the project area and borrower should be with great care based on Kigoma, Kagera project. A fixed period of time is needed to foster such an institution or to build trust between fishing villages and an existing NGO. Thus, an implementing body that has been monitored should be selected in a region where measures to strengthen the existing NGO have been implemented and where there are fisheries communities with progressive knowledge and education, as in the case of Programme 8, the Fishery Community Poverty Eradication Programme.

Programme 9: Fisheries Co-management Programme

A Objectives

[Goal] Sustainable Use of Fishery Resources

- To enhance the basic understandings about resource management of the fishers and to foster self-reliant planning and implementation capabilities in fishery management.
- To establish an organizational system that will enable fishers to conduct independent fishery surveillance and data collection activities.

B Brief Description

Project site :78 fish landing sites in Dar es Salaam and Coast regions

Duration :36 month

Project cost :US\$ 833,400

The objectives of this programme are to establish a collaborative resource management system conducted by the fishers, to strengthen resource management education for fishery cooperatives and to assist the fisheries community's environmental project that will be implemented by the fishery cooperatives. Due to the shortage of fisheries officers, it is difficult to administer fishery resource management activities. In addition, it has been difficult to compile national fishery statistics since reports from a segment of the fish landing sites on landing conditions are inadequate. All these factors combined necessitates the formulation of basic resource management policies. To resolve these conditions, the LVEMP at Lake Victoria established more than 600 BMUs, cooperatives that are in charge of managing the fish landing sites and collecting fish landing data, and the sanitary management of the landing beaches. But due to the fishers' inadequate knowledge resource management, their lack of consensus, and the lack of a financial assistance system, the majority of the BMUs are not functioning. Through learning the BMU's experiences, this programme aims to reform the fishers and fisher cooperatives' awareness about independently managed fishery resources and expanding their activities. In addition, a project to create a fishery management model of fisheries communities at Dar es Salaam and Coast regions will be studied as a means of developing independent management methods that can be applied nationwide.

C Condition for Implementation

A change in fisher awareness about fishery resources management is needed. To accomplish this, the fisheries officers from each region must provide the fishers with appropriate information and build up a relationship of trust. Therefore, the priority goal is to strengthen the capabilities of the district fisheries officers and extension personnel. In addition, adequate preparation time is needed to manage the entire regions.

Programme 10: National Fish Export Promotion Programme

A Objectives

[Goal] Sustainable Development of Fish Exports

- To survey exporters, the evaluation of purchasing preferences of general consumers in major advanced countries where Tanzania's products are exported; and study the product standards, quality, grading, type of processing, inspection system that are demanded for Tanzania's exported products.
- To identify the marketing routes of smoked, dried and traditionally processed products in Africa, the trends of the informal market, pricing mechanism, etc. and draft a policy to export fishery products to the African interior.
- To construct a new quality inspection laboratory to conduct quality control inspections of fishery products in the country, raise the standard of quality inspections, and promote the export of safe fishery products.

B Brief Description

Project site	:-
Duration	:36 month
Project cost	:US\$ 590,000

The National Fish Export Promotion Programme embraces the intercontinent trade activities and regional African trade activities. This programme to promote the intercontinental fishery export is comprised of two components, a marketing survey and the construction of a quality control laboratory. The marketing survey will investigate means to improve the competitive viability of Tanzania's major fishery export products, the Nile perch, Dagaa, seaweed, and aquarium fish in the international market, new markets, value added export products, and other factors, and a production and sales strategy will be formulated. As an expanded production volume of the Nile perch, which comprises 90 percent of fishery exports, cannot be expected, a shift from fillet processing to a new and higher value added processed product will be developed; and market demands must be clearly understood. The fundamental component that supports the competitive viability of exported products in the international market is stable product quality. Presently, due to inadequate equipment, domestic quality control inspections are limited to bacterial tests, and heavy metal and agricultural pesticide residue tests are consigned to a testing centre in South Africa. A laboratory will contribute to establish a self-reliant quality inspection system in the country, capable of expanding testing activities to achieve consistent, quality processed export fishery products. The regional African trade activities are still not yet fully understood and mostly handled by the informal sector. Trust caution have to be practised in order to get a clear picture.

C Condition for Implementation

The programme for both the intercontinental and regional African trade aims to provide market information to promote investments by processing companies and to effectively implement the programme by targeting companies with capital. As of FY2000/2001, Nile perch export has steadily grown due to the increased EU demand for fillet. Thus although factories are interested in developing new products, investment has been passive. Developing higher value added processed Nile perch products is a mutually shared issue that must be addressed by the entire processing industry. Thus, the priority is to achieve a consensus within the industry in a short period of time. However, since the equipment for the quality control laboratory will be placed under the direct administration of the

Fisheries Division, very minimal management problems are foreseen. Therefore, the immediate implementation of the programme is feasible. On the contrary, the programme implementation for the regional African trade programme will have more time since the entire process is not yet known.

Programme 11: Lake Victoria Major Landing Beach Improvement Programme

A Objectives

[Goal] Sustainable Development of Fish Exports, Reduction of Poverty and Improvement of the Livelihood in the Fisheries Communities

- To ensure the quality of Nile perch product through the construction of landing facility
- To organize fishers cooperatives, which have the function of joint sales of the catches, through the management of the landing facility.

B Brief Description

Project site :Lake Victoria; Igombe TX (Mwanza), Mwigobero (Mara), Nyamkazi (Kagera)

Duration :36 month

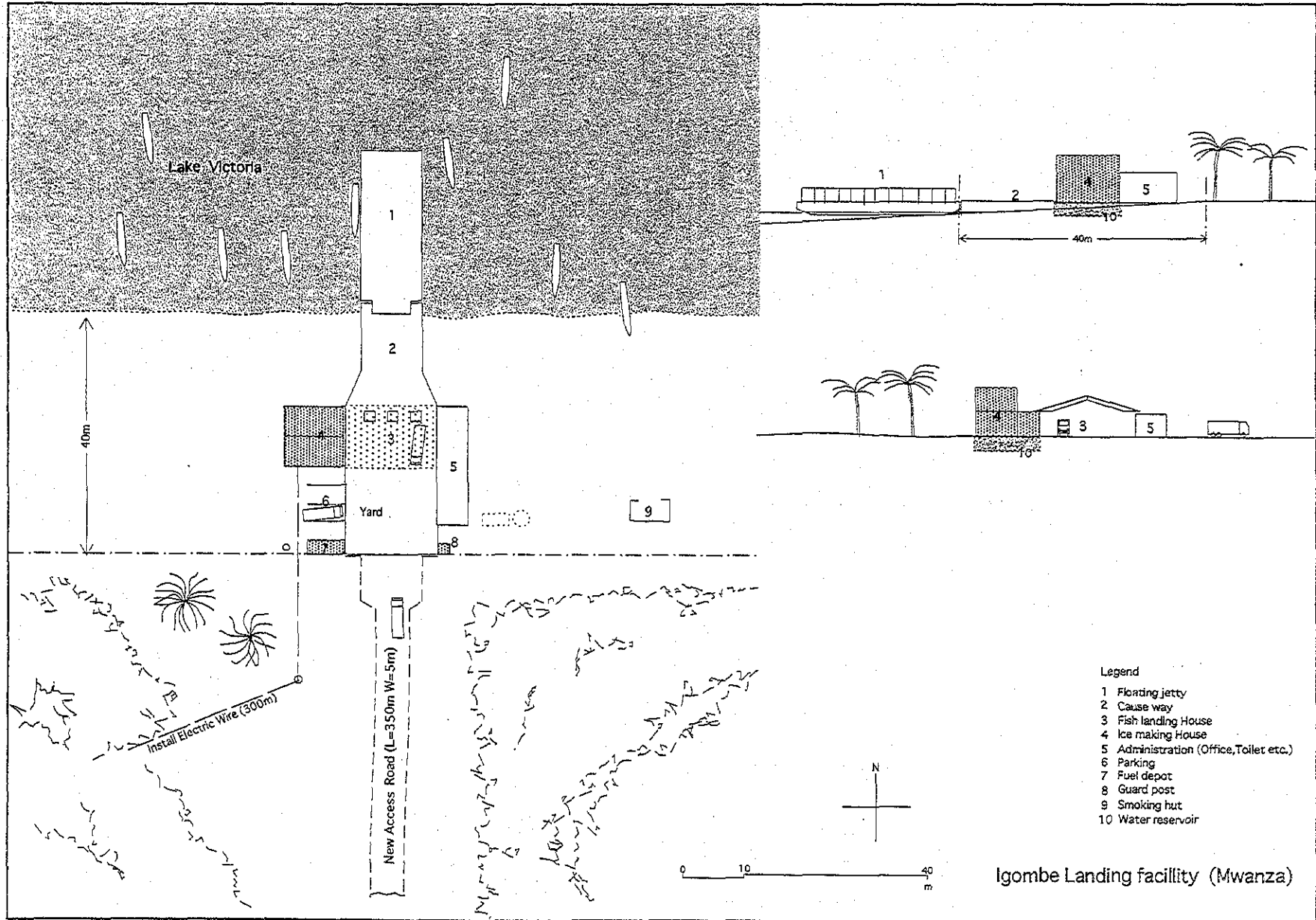
Project cost :US\$ 1,856,721

Landing beaches along Lake Victoria for Nile perch which are destined for EU markets, have rapidly improved hygienically through ad-hoc visit of EU inspector and technical advice from quality control section of Fisheries Division. There are some platforms for weighing and screening of fish built by fish agents themselves. Landing barges are also installed by the effort of Fisheries Division at selected beaches. But there are more than 600 landing beaches along the lake and further hygienic handling of fish is requested to mitigate post harvest loss. This project aims at introducing hygienically improved fish handling system by means of installation of a landing jetty or landing barge for efficient landing work, and construction of a fish handling facility which satisfies the HACCP standard so that fish can be landed, selected, weighed and loaded to the insulated van or insulated carrier boat as soon as possible. In addition, the project tries to organize fishers who are attracted by the landing facility, support fishery cooperative and its operation, and contribute to the fishers' income.

C Condition for Implementation

The aim of the programme is not only to improve the sanitary conditions of the fish-handling task, but to organize the fishers by having them manage the facilities. Therefore, the initial priority is to strengthen fisher capabilities through their use of the facilities. Careful training and monitoring activities are especially required since a new cooperative will be created to manage and maintain the ice-making equipment as well as the other facilities.

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Programme 12: Fisheries Communities Development Programme

A Objectives

[Goal] Reduction of Poverty and Improvement of the Livelihood in the Fisheries Communities

- Introduce resident participation approach in community development, remedy fisher and village council dependency on the government, and raise self-reliance.
- Organize poverty-level fishers and their community.
- Strengthen administrative functions of organizations to improve welfare in fisheries communities.
- Foster the technology needed to develop the economy of the fisheries community.
- Increase the income of poverty-level fishers.

B Brief Description

Project site : Southern part of Coast Region

Duration :36 month

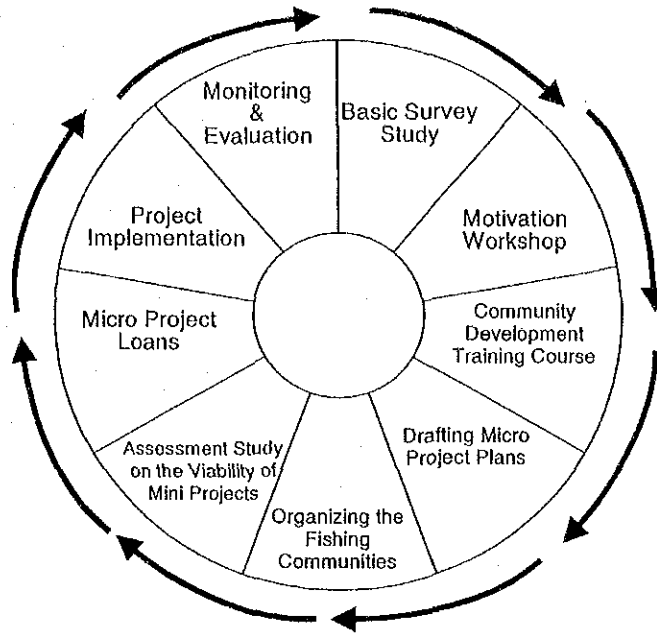
Project cost :US\$ 581,073

The fisheries community development programme is concerned with reduction poverty in fisheries communities through an approach based on community resident participation and organized community leadership, in contrast to the traditionally pursued comprehensive approach to farming and fisheries community development by government leadership. The new approach will be combined with a series of micro projects that will be planned, implemented, and monitored to launch the creation of cooperatives and to improve the institutional capabilities of the community.

The fisheries communities, which cannot depend on subsidies and other forms of financial assistance from the government, must efficiently implement improvements using the limited taxes collected at the fish landing sites. Therefore, community issues will be approved by the village council or the village decision-making body, fishery groups, and the residents. A model project with a small budget of US\$ 10,000 to US\$ 50,000 will be implemented in the form of OJT aimed at strengthening the activity planning capabilities, negotiating skills with the government, and activity operations and management skills of the village council and fishers. The micro project will be managed and supervised by a team of district fishery officers, cooperative members, rural community development officers, and others who are familiar with the local environment. The programme will provide training in project design, securing financial resources, management and operations for district officers. Simultaneously, a network of NGOs and other development institutions will be created to ensure that the project is efficiently managed; and a fisheries community development fund will be established to help the sustainability of the programme's activities after the programme itself is completed.

C Condition for Implementation

The fishery community development programme is highly considered as a development model for fishing villages, and its extension potential is high. It is also directly relevant to the national plan and the basic structure of this Master Plan since it deals directly with the poverty and living environment of the fishers. Since the programme site is located in the southern coast region, access to Dar es Salaam is good and direct guidance from the Fisheries Division is possible. Therefore, the programme is relatively easy to manage.



The Development Process of Fishing Village

Programme 13: Fisheries Information System Improvement Programme

A Objectives

[Goal] Sustainable Development of Fish Exports, Efficient Administrative Services and Financial Management

- To establish a new data processing system in order to achieve quick data processing and analysis of landing information
- To improve the capacity for data collection, data processing and report generation
- To publish fisheries statistics between 1997 and 2001 by using a new data processing system
- To arrange fisheries marketing information by market such as number of fish traders, fish prices, fish inflows by production area, etc.
- To establish the project information coordination office, to keep major publications of implemented fishery projects in digital figure by computer system, and to connect the office to/from the major district fishery offices and training institutions by internet to send / receive the information.

B Brief Description

Project site :Statistic Section of the Fisheries Division

Duration :12 month (This period for the programme is utilised for the equipping the facility and establishing the fisheries information system, and the system will be continuously operated during the Master Plan as a normal service provided by the Fisheries Division.)

Project cost :US\$ 513,493

Fisheries statistics system stopped functioning due to the lack of data collection in some areas and the latest publication of fishery statistics by Fishery Division was for 1996. In "Fisheries Information System Improvement Programme", Statistics Section of Fisheries Division and major District offices will be equipped with computer instrument, and the fisheries statistics system "TANFISH" will be improved, and then fisheries statistics between 1997 to 2001 will be published. Moreover, the present fisheries statistics, which can give only the information of fish landing, will be strengthened to be an overall fishery statistics by adding fisheries marketing information such as number of fish traders, fish prices, fish inflows by production area, etc. For this purpose, the information collection capacity will be well arranged in major markets such as Dar es Salaam fish market, Kariakoo market and Kirumba market, etc.

The fishery information and data from fishery projects in Tanzania is extremely useful as information source on the fishery administration. Therefore the Project Information Coordination Office will be settled in the Fisheries Statistics Section, in which major publications of implemented fishery projects will be kept in digital form in computer system, and the office to/from the major district fishery offices and training institutions will be connected by internet to send / receive the information.

C Condition for Implementation

Fisheries Division statistics have been unavailable since 1997. This lack of fisheries data must be immediately rectified in terms of fisheries administration.

Programme 14: Fisheries Training Institute Improvement Programme

A Objectives

[Goal] Efficient Administrative Services and Financial Management

- The depreciated educational equipment of the Nyegezi Freshwater Fisheries Training Institute will be replaced to keep abreast with the technical development of artisanal fisheries; and practical training services that meet the needs of the existing fisheries industry will be pursued.
- High quality training services will be provided following the replacement of the equipment and facilities of the Nyegezi Freshwater Fisheries Training Institute and the retraining of its faculty members.
- Measures to strengthen the capabilities of fisheries officers and private fisheries personnel will be pursued in conjunction with improved training services.
- Restructuring the organization and creating new financial sources for the fisheries training institute will contribute to the sound operations of the institute and enable it to provide inexpensive and efficient training services.
- A short-term programme will be developed and services will be provided in the Master Plan to meet the training demand of the district officers and fishers.

B Brief Description

Project site :Nyegezi Freshwater Fisheries Training Institute (Mwanza)

Duration :24 month

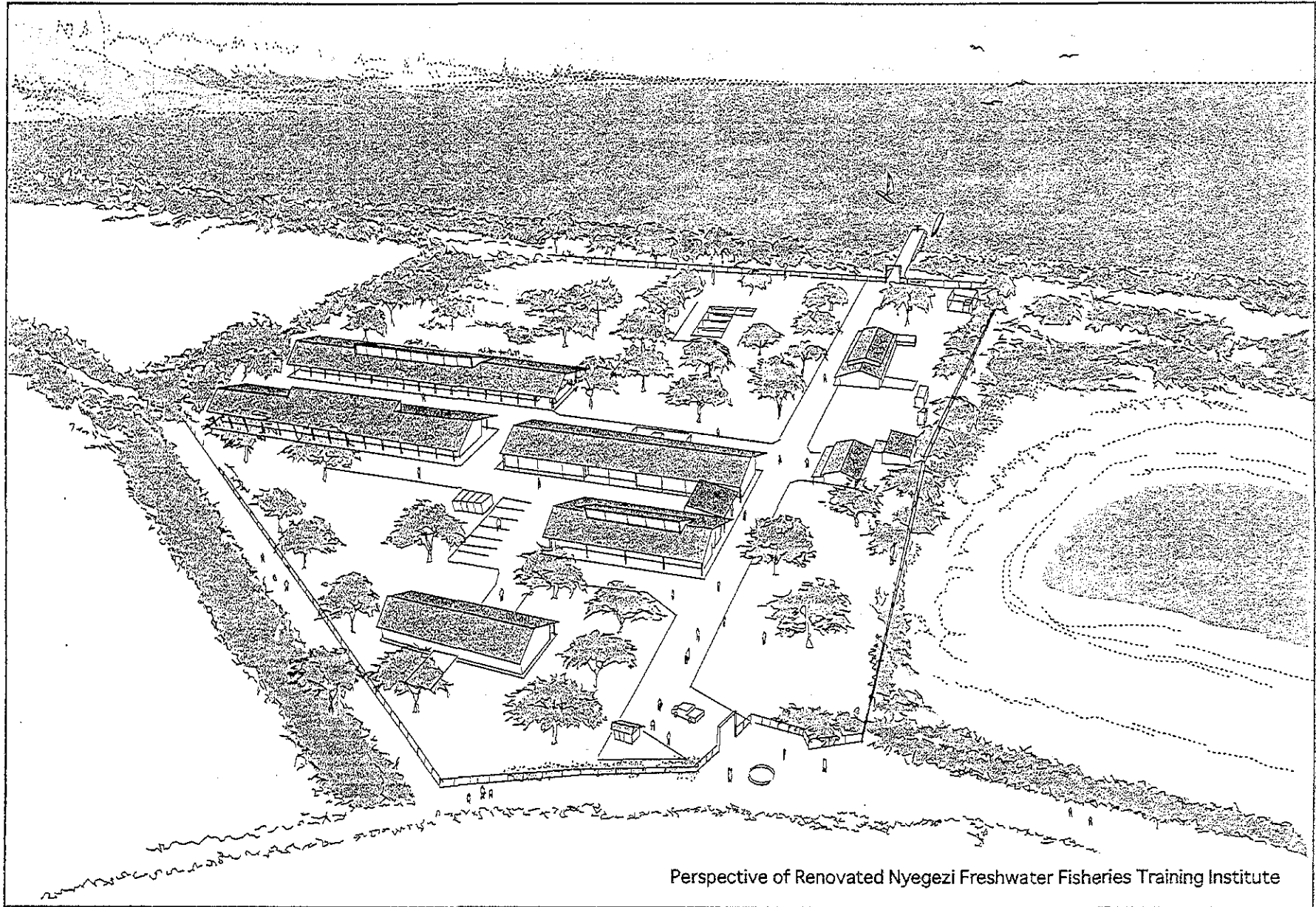
Project cost :US\$ 2,642,733

Strengthening the capabilities of private sector fishery related personnel and government fisheries officers through educational and training programmes is essential in order to improve public fisheries services and to conduct effective fishery extension activities. However, the fishery educational facilities and equipment are badly depreciated, and the shortage of advanced training for instructors has greatly lowered educational quality. This has greatly impeded efforts to strengthen the capabilities of fishery related personnel and the situation must be quickly improved. Under Fisheries Training Institute Improvement Programme, the facilities and equipment of the Nyegezi Freshwater Fisheries Training Institute will be improved and a retraining course for its faculty will be implemented to strengthen educational services. In addition, this will be implemented in conjunction with the Master Plan's priority programme to strengthen personnel capabilities.

C Condition for Implementation

The high motivation of district fisheries officers and educational staff members of the training institutions, which will greatly affect the efficiency of all the programmes, is needed to successfully implement this Master Plan. The management risk of the Nyegezi Freshwater Fisheries Training Institute, the implementing body of this programme, is minimal since there is an adequate number of staff and technical personnel.

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Perspective of Renovated Nyegezi Freshwater Fisheries Training Institute

Programme 15: Fisheries Master Plan Implementation Training Programme

A Objective

[Goal] Efficient Administrative Services and Financial Management

- To strengthen the project's management capabilities and related technical knowledge of the personnel involved in the priority programmes of the Master Plan
- To achieve sound management and uninterrupted implementation of the project.

B Brief Description

Project site :-

Duration :36 month

Project cost :US\$ 144,302

To efficiently implement the Master Plan, it is important that the Fisheries Division, the district Fisheries Division and training institutions adequately fulfil their responsibilities in implementing the priority regional programmes. The Master Plan is a ten-year plan and must be flexibly designed to cope with conditions related to financial sources. Hence a training programme in project management will be implemented for the instructors at the Nyegezi Freshwater Fisheries Training Institute, who teach the fisheries, processing, and cooperative courses, and the District Executive Directors, and the executive fisheries officers of the Fisheries Division and district Fisheries Division. The training programme will consist of a workshop and classes on project management technology and advanced technology that are aimed at promoting an understanding of the Master Plan and monitoring activities.

C Condition for Implementation

Regional linkage is an important element that is needed to coordinate the 15 priority programmes that are part of the basic design of the Master Plan. In addition, to ensure that the programmes are implemented efficiently in a short period of time, it is important that the responsible personnel in each region and for each programme fully understand the content of the Master Plan and have the technical skills and leadership capabilities to implement the programmes.

5 COST ESTIMATION

Based on the conditions explained above, a summary of the costs for each priority programme is listed below. The total Master Plan cost based on FY2001 cost is estimated at about US\$ 21,970,000, of which 68 percent or US\$ 15,040,000 will be invested in facilities and equipment and the remaining US\$ 6,930,000 will be used to cover the cost of experts, consultants, hired labour, training and operation.

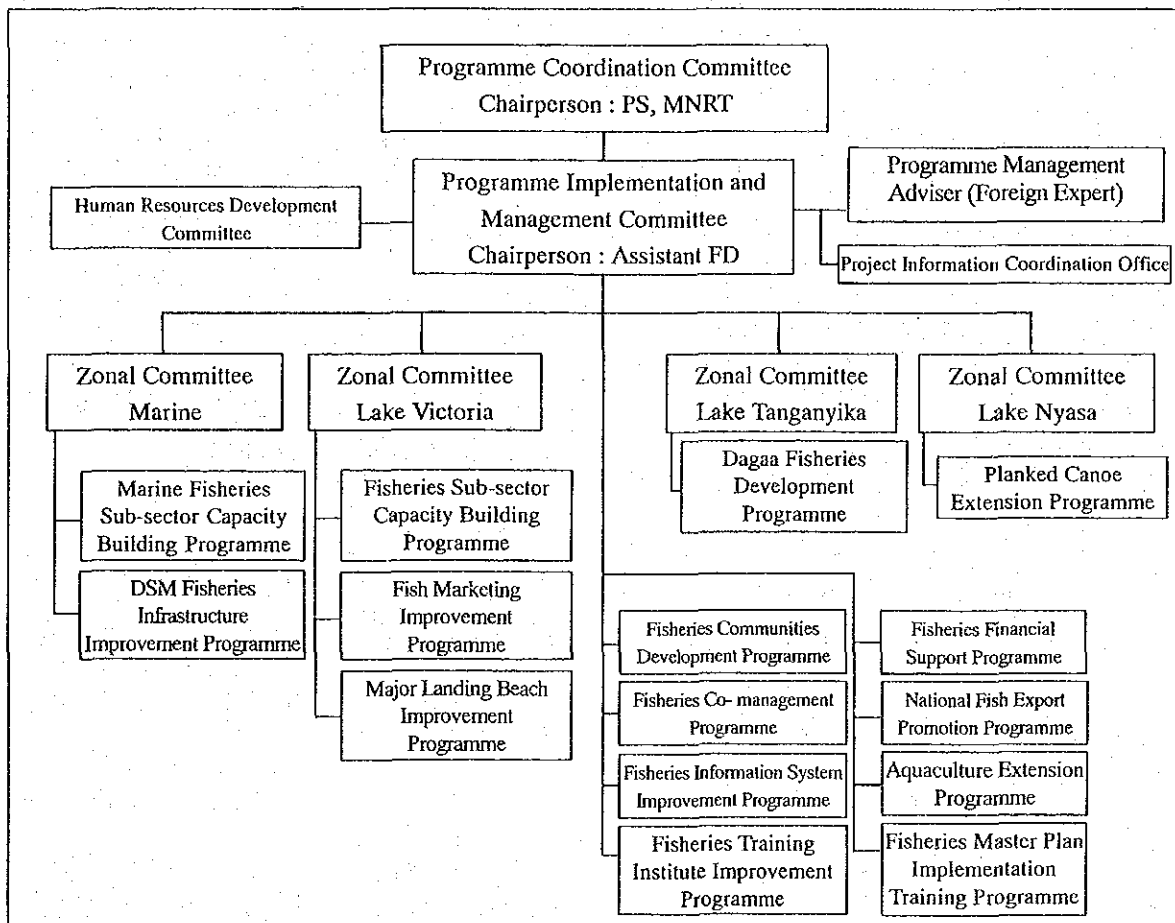
Estimated Cost for Priority Programmes

Priority Programmes	Cost (Tsh.)	Cost (US\$)
Marine Fisheries Sub-sector Capacity Building Programme	2,602,099,308	2,970,433
Dar es Salaam Fisheries Infrastructure Improvement Programme	3,184,199,556	3,634,931
Lake Victoria Fisheries Sub-sector Capacity Building Programme	221,415,132	252,757
Lake Victoria Fish Marketing Improvement Programme	5,105,518,092	5,828,217
Lake Tanganyika Dagua Fisheries Development Programme	116,437,044	132,919
Lake Nyasa Planked Canue Extension Programme	123,177,864	140,614
Aquaculture Extension Programme	548,025,600	625,600
Fisheries Finacial Support Programme	1,073,100,000	1,225,000
Fisheries Co-management Programme	730,058,400	833,400
National Fish Export Promotion Programme	516,840,000	590,000
Lake Victoria Major Landing Beach Improvement Programme	1,620,187,404	1,849,529
Fisheries Communities Development Programme	509,019,948	581,073
Fisheries Information System Improvement Programme	449,819,868	513,493
Fisheries Training Institute Improvement Programme	2,315,034,108	2,642,733
Fisheries Master Plan Implementation Training Programme	126,408,552	144,302
Grand Total	19,241,340,876	21,965,001

6. IMPLEMENTATION PLAN

6.1 Implementation Structure

The implementing agency of the Master Plan is the Ministry of Natural Resources and Tourism, and the Fisheries Division will be the focal centre that will be responsible for the implementation and the budget of the projects. To efficiently implement the Master Plan, a Programme Coordination Committee will be installed as an executive body and it will be responsible for supervising the implementation of the projects. In addition, a Programme Implementation and Management Committee will be formed, responsible for establishing the priority standing of all the programmes and specific management policies. Under this committee, zonal committees at major water bodies will be set up that will be responsible for coordinating the priority projects with other regional development plans at the regional/district level.



Organizational Chart of the Priority Programme Implementing Bodies

(1) Programme Coordination Committee

The Permanent Secretary of the Ministry of Natural Resources and Tourism will be the chairperson of the Programme Coordination Committee which comprises heads of project sections at several ministries and agencies. The participating ministries and agencies are the Ministry of Natural Resources and Tourism, the Fisheries Division (headquarters), Ministry of Local Government

(coordinates with local governments), the Vice-President Office (environmental issues), and members who will be appointed by the chairperson as required. The committee will see to the steady implementation of the Master Plan and priority programmes and coordinate the programmes with other sectors as required.

(2) Programme Implementation and Management Committee

The vice-director of the planning section of the Fisheries Division will serve as the chair of the Programme Implementation and Management Committee, and will comprise four sections of the Fishery Division (planning, quality control, fishery surveillance, and training) and representatives from each of the four regional committees. The Programme Implementation and Management Committee will draft the basic implementation policies of the priority programmes and will supervise, monitor, and technically evaluate the programme activities. They will also be responsible for changing the priority standing of the programmes, their implementation, and operations as required. They are also required to survey any items related to the programmes consigned to them by the Programme Coordination Committee, and they must submit a report on their findings to that committee. The committee's main functions are as follows.

- (a) Select personnel needed to implement the Master Plan and carry out budgetary measures.
- (b) Coordinate the implementation schedule of the priority programmes, secure capital, and efficiently distribute human resources.
- (c) Designate and dispatch technical experts to assist the activities of the priority programmes as needed.
- (d) Carry out surveillance and evaluation activities with the cooperation of zonal committees to implement the priority programmes, and revise and make changes as needed to resolve problems that arise.

(3) Zonal Committees

The zonal committees will comprise the heads of each priority programme (usually the district fisheries officer) and private organizations (fisher groups, NGOs). They are responsible for monitoring the implementation of the programmes at the regional level and reporting to the Programme Implementation and Management Committee. In addition, the zonal committees will coordinate the development policies of each region and development projects with the programmes of this Master Plan.

(4) Programme Implementing Office

A programme office will be set up for each programme and each programme coordinator will oversee programme management and operations (see Chapter 3 of the Main Report on each priority programme).

(5) Others

The management and monitoring capabilities of each committee member implementing the priority programmes must be strengthened. In addition, since the majority of the priority programmes will be implemented utilizing international donor financial assistance, a foreign technical expert will be assigned as a technical advisor to the programme implementing committee. Due to the vast land area of Tanzania, it is difficult for the programmes' heads to meet frequently. Therefore, a project information coordination office will be created in the Fisheries Division (see priority program 13) that

will be responsible for providing information on project monitoring to major fisheries institutions and between priority programmes.

6.2 Operation and Maintenance Plan

The Master Plan is comprised of 15 priority programmes, and each programme will have their own facilities and equipment. The maintenance and operating costs of these facilities and equipment will be covered under the operating costs of the project, but for those programmes where market profitability is realized, the programme will be transferred to the district government during the project term, and the operating costs will be borne by the beneficiaries. The district will be responsible for the maintenance of the facilities and equipment.

6.3 Implementation Schedule

6.3.1 Criteria for Programme Implementation Priority

Due to the diverse development needs of the vast land area of Tanzania, the priority programmes will serve as trial development models. Therefore, implementing the programmes in phases will enable the programme to be reviewed to obtain feedback on each programme's impact and the lessons that were learned. Practically implementing the programme according to the regional characteristics will be efficiently economical both in terms of time and funds. The following four criteria were used to determine the priority standing of the 15 programmes that will be implemented under the Master Plan.

- (a) Efficiency
Number of beneficiaries, degree of the participation of the fishers, apply of appropriate technology, effective coordination with other project
- (b) Programme Impact
Social and economic benefit, the ripple effect
- (c) Management and Operations Capabilities
Sustainability, support from Government, donors, NGO, etc.
- (d) Impartial Fishery Development Input

6.3.2 Implementation Schedule

[Short-term Programmes: 2002 to 2004]

The implementation period of the Master Plan will be for ten years starting in 2002/2003. In the initial year 2002, the Programme Coordination Committee and Programme Implementation and Management Committee will be created and preparations to implement the programmes will begin. The short-term programmes will begin in 2002 and end in 2004. A detailed implementation plan and required budgetary measures will be made for each programme. Technical assistance will be provided at this time for programme implementation, schedule coordination, and negotiations with donors and a foreign technical advisor will be dispatched. At the field level, the district fisheries officers will organize the basic data on fishers, fishing boat registrations, and organizations that will be needed to implement the programmes. A workshop for fishers and private companies will be implemented in each region to promote understanding about the Master Plan.

[Medium to Long-term Programmes: 2005 to 2010]

An interim evaluation will be made on the impact and conditions pertaining to the programme's implementation for short-term programmes. Based on the lessons that were learned, the implementation period for the remaining programmes will be re-reviewed.

Implementation Schedule of Priority Programmes

		Short Term			Med Term			Long Term			
		2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12
	Establishment of Programme Coordination and Programme Implementation & Management Committee		█								
	Mid Term Evaluation				█						
	Monitoring		█	█	█	█	█	█	█	█	█
1	Marine Fisheries Sub-sector Capacity Building Programme		Phase I	Evaluation	Phase II						
2	DSM Fisheries Infrastructure Improvement Programme	Pre-survey and planning for the new FD's office	█	█	█	█	█				
3	Lake Victoria Fisheries Sub-sector Capacity Building Programme						█	█	█		
4	Lake Victoria Fish Marketing Improvement Programme		█	█							
5	Lake Tanganyika Dagaa Fisheries Development Programme		Phase I	Evaluation	Phase II						
6	Lake Nyasa Planked Canoe Extension Programme						█	█	█		
7	Aquaculture Extension Programme							█	█	█	
8	Fisheries Financial Support Programme					Phase I		Phase II			
9	Fisheries Co-management Programme		█								
10	National Fish Export Promotion Programme				█	█	█				
11	Lake Victoria Major Landing Beach Improvement Programme							█	█	█	
12	Fishing Communities Development Programme		█	█	█						
13	Fisheries Information System Improvement Programme		█	█	█	█	█	█	█	█	█
14	Fisheries Training Institute Improvement Programme			█	█						
15	Fisheries Master Plan Implementation Training Programme		█	█	█						

██████████ Construction Component

7 EVALUATION

7.1 Socio-economic Benefit

It is considered that the lower awareness or self-reliant nature of the fishers and dysfunctional institutional system which supports fishers, particularly cooperatives, are part of the reasons for reduced efficiency and effectiveness of the previous fisheries development projects in Tanzania. The benefits that will be derived from this Master Plan, which focuses on the capacity building of the fisheries sector, are mainly socio-economic, and it will not necessarily produce quantitative economic impact. The overall benefits that will be achieved by the Master Plan are explained below.

(1) Increased Fisher Income and Mobilisation of the Fishers Community Economy

Developing cooperative activities by organizing the marketing activities of fisheries production will improve production efficiency, expand the distribution market, and increase fisher income (Priority Programmes 1 and 11). In addition, improvements in post harvest processing technology will increase the value added of fishery products, which will in turn, raise the income of processors (Priority Programmes 4, 5, 10). Increased fisher income will improve the purchasing power of the fishers and mobilize the economic activities of the fisher communities.

(2) Effective Use of Resources and Increased Food Supply

Due to inadequate scientific data on resources in Tanzania, fisheries exploitation effort must be carefully monitored. In view of the anticipated increase in fish demand in the next decade, the fishing pressure on fishing grounds is expected to increase. Under this Master Plan, the aim is to achieve the profitability of fishers using appropriate fisheries technology, while increasing fisheries production by distributing fishing pressure through diversification of the fishing grounds and other measures. In particular, organizing the fishers will not only achieve efficient production, but will enable the task of resource management and control to be implemented by the fishers in future.

To prevent the risk of overexploiting fishery resources through improved fishing technology, a plan to reduce post harvest losses (Priority Programme 5) and effectively utilize the fish remnants of processing factories will be developed (Priority Programme 4). The goal is to increase the food supply without increasing the burden on fishery resources. The programme on environmental education (Priority Programme 12) will raise fisher awareness about fisheries management and develop self-reliant fisheries management activities.

(3) Earning of Foreign Exchange and Provision of Employment

An increased supply of the Nile perch, which comprises 90 percent of the country's fisheries exports, is not expected due to limited resources. Therefore, a programme to develop a production base to produce a higher value added processed product using the same raw material will be implemented (Priority Programme 10), and an increase in export value is anticipated. Achieving a stable export industry will also lead to stable income and employment for artisanal fishers, whose existence is interdependent with the export processors (processing companies are legally prohibited from engaging in fishing activities and they are dependent on artisanal fishers for their raw supply). In addition, 15 percent of the financial source for the planned Fisheries Development Fund will stem from Nile perch export royalties. Therefore, a stable export industry will also benefit artisanal fishers through the Fisheries Development Fund.

(4) Expanding the Economic Activities of Women in Fisheries Communities

Fish processing is an important economic activity for women, and women groups have been given priority in the programmes that will provide supervision in improved processing technology. This will create economic opportunities for women and increase their income. In addition, the participation of women in fisheries community development projects will strengthen their role and voice in the community (Priority Programmes 5, 9, 12).

(5) Mobilizing Organizations

In the Master Plan, the established fishery cooperatives in Dar es Salaam and Coast region will assist in developing a model cooperative (Priority Programme 1). The success of this pilot project will improve fisher's perception on old-style cooperatives, and mobilize local fisher group activities.

(6) Strengthen Regional Decentralization of the Fisheries Sector

The key to achieving successful regional decentralization is to implement direct measures to strengthen the capabilities of the government fisheries officers and to improve the self-reliance of the district fisheries administration (Priority Programmes 14, 15). The activities of the teams comprised of district fisheries officers, cooperative officers, and agricultural extension personnel are anticipated to promote the rational use of limited human resources and raise the districts' administrative capabilities (Priority Programmes 7, 9, 12).

(7) Achieving Impartial Development

The Master Plan has paid attention to the development of Lake Tanganyika and Lake Nyasa where there has been less investment, in contrast to the marine coast and Lake Victoria. The implementation of the programmes (Priority Programmes 5, 6) will benefit the livelihood of the local fishers where development has been relatively minimal and this will achieve equitable and fair development.

7.2 Environmental Evaluation

Of the above 15 Priority Programmes, only Priority Programmes 2, 4, and 11 have significant construction components. Programme 2 would require mandatory EIA (Environmental Impact Assessment) or an environmental consideration report. Priority Programmes 4 and 11 may or may not require EIA.

Priority Programme 14 which involves rehabilitation of existing Nyegezi Freshwater Fisheries Training Institute may or may not require EIA. As the rehabilitation will be at the same location as existing buildings, significant negative impacts is not expected on the natural environment. Priority Programme 6 is not a boat building project per se but rather a project to introduce Lake Nyasa Planked Canoe Extension Programme, this project is not expected to have any significant impact on the environment and thus would not require an EIA.

The other programmes are mainly comprised of "soft" components, are not in the mandatory list, are not located in Environmentally Sensitive Areas, and not expected to impact significantly on the natural environment, therefore EIA would not be required.

In this Master Plan, IEE was performed on Priority Programmes 2, 4, and 11 to identify possible significant impacts and to propose mitigation measures to lessen or avoid these impacts. Subsequently according to the NEMC (National Environment Management Council)'s screening procedure, if the programme is "Passed", the programme will be submitted for review and implementation. If the programme "Failed", the proponent or implementation body will then need to carry out an EIA and

comply with the EIA Procedure.

The final decision on whether a project component will require an EIA or not, or a less stringent assessment report, will depend on NEMC's evaluation of the "Environmental Assessment Registration Forms" for the programme's components.

8 RECOMMENDATIONS

(1) **Rapid Implementation of the Priority Programmes and Use of Foreign Experts**

The Master Plan is comprised of 15 priority programmes and its diverse activities range from finances, providing technical support to local communities, to requesting financial assistance from international donors. The project covers four major water bodies in the country and its implementation is complex. Therefore, the implementation schedule of its many programmes and activities, and their progress must be accurately grasped. To accomplish this, the Fisheries Division, which is the main government body that will oversee the project, must swiftly establish a Project Implementation and Management Committee, enact appropriate budgetary measures, and officially request the cooperation of assistance institutions, and other measures to enable the programmes to be implemented fast.

The majority of the priority programmes will be implemented as model projects at the district level, but technical assistance in the regions are still dependent on assistance from the central government. Thus *the committee must secure budget adjustments to enable it to coordinate the programmes at their initial start.*

To facilitate the task of programme implementation and coordination, it is recommended that a foreign expert is dispatched and placed in the committee in view of the need for initial input from assistance institutions and the neutral position of such institutions.

(2) **Early Establishment of the Fisheries Development Fund**

To implement the Master Plan, it is important to secure a stable financial source; As this financial source, the Fisheries Development Fund that has been pursued under the new fisheries law, should be put into practice as soon as possible. Much of the initial investment that will be made for the priority programmes will be by donor countries and international institutions, but diverse financial sources must be procured to cover the increased operations and maintenance costs that will be incurred domestically. This will stabilize the finances of the programmes.

Presently, the provisions of the draft proposal of the Fisheries Development Fund has focused on developing the BMU and protecting fisheries resources. The financial source of the fund will stem from licensing fees (25%) and royalties (15%), and the scope of the fund is estimated at US\$1,000,000. Since the financial source stems from taxes, it is appropriate and fair to allocate a fixed amount of the fund for environmental conservation at Lake Victoria. However, it is necessary to study the flexible and far-ranging use of these funds for artisanal fishers' education, for development of improved processing and marketing technology that effectively uses resources, and for micro projects that are needed to develop the fisheries communities.

(3) **Publication of Annual Report on Fisheries to Promote Public Information**

Due to structural reforms and regional decentralization measures that have been pursued by the central government to replace the traditional top-down administrative approach, the key to achieving successful public administration is to obtain the cooperation of the private sector and fishers. Therefore, all the programmes and projects pertaining to fisheries management, fisheries community development, and others that will be implemented under the Master Plan will include the participation of fisher organizations and private NGOs. Thus an important task is to cultivate the understanding of the participants and to evaluate and review their roles and activities.

Unfortunately, the information needed to promote the understanding and evaluation of fishery activities is generally managed by and limited to a few individuals, and public information is

nonexistent. Presently, the dissemination of the Annual Report of the Fisheries Division is strongly recommended as a means of promoting the widespread understanding of fisheries development policies and their progress. Public information that is available nationwide is essential for the regional fisheries administration, which lacks parallel ties with other government bodies and institutions due to decentralization. In particular, the evaluation of current project policies improves effectiveness and efficiency, and plays an important role in improving administrative services despite limited financial sources. Therefore, it is recommended that a policy evaluation system that will provide public information is created in the Fisheries Division.

Since Tanzania's national policy and the assistance policies of donor countries have focused on poverty eradication and the trend is for major sectors to converge on it, it is quite necessary to obtain the consent for the investment of the fisheries sector, even small sector. The Fisheries Division must therefore provide public information on the contribution of the sector to the national socio-economy.

(4) Integration of the Nyegezi Freshwater Fisheries Training Institute and the Mbegani Fisheries Development Centre

It is recommended that the Nyegezi Freshwater Fisheries Training Institute and the Mbegani Fisheries Development Centre be rationalized and integrated, in order to raise the impact of the educational and training activities. Since 99 percent of fisheries production in Tanzania is carried out by artisanal fishers, it is essential that the district fisheries officers and fisheries extension personnel, who are in charge of providing guidance for fishers, maintain an adequate level of technical expertise. In view of the number of government fisheries personnel available, it is irrational to maintain two independent training institutions. To raise the operations ratio of educational equipment and facilities that presently overlap, their common usage is recommended, excluding inland and marine fisheries related activities.

Since 80 percent of fishery production and 70 percent of the district fisheries personnel belong to inland districts, it is suitable that the functions of the Nyegezi Freshwater Fisheries Training Institute are upgraded. In particular, if regional cooperation between Kenya and Uganda, which both share the use of Lake Victoria, is expanded, the role of Nyegezi in educating the fishers and government fisheries officers will become important to promoting stable regional cooperation. Measures to strengthen the functions and the facilities and equipment of the Mbegani Fisheries Development Centre to provide services in the technical development of coastal fishers are recommended. Facilities and equipment for industrial fisheries can be leased to the private sector and practical training with the cooperation of the private sector can be pursued.

(5) Programme Implementation Based on a Sense of Responsibility and Self-reliance of the Beneficiaries

The fundamental objective of the programmes are to strengthen the capabilities of the district fisheries officers who provide direct guidance to the fishers. The aim is to foster self-reliant fisheries by fishers by effectively utilizing fishery production equipment and materials. However, the general perception of government support of fisheries remains tied to the free government services that were provided during the socialist era. Subsequently, many problems such as the lack of basic fisher understanding about fisheries management, the profitability of fisheries activities, and the lack of technical and basic capabilities exist. Therefore, workshops and other basic training activities will be held to promote the responsibility and role of the beneficiaries and to define their responsibilities prior to the start of the programmes and to acknowledge the importance of selecting fishers with a high sense of responsibility and capabilities.

(6) Suggestion for the Project Implementation from Financial Aspect

This Master Plan proposes programmes which consist of various factors. Though it has high economical benefits, its financial returns are low. Therefore, for the initiation of programmes, the establishment of the Fisheries Development Fund (FDF) from royalties and active commitment by the Fisheries Division in supporting fisheries development are necessary together with securing foreign aid.

Considering individual programmes, programmes which propose the construction of Kirumba market and renovation of Nyegezi Freshwater Fisheries Training Institute require high costs for not only construction but also its maintenance. Appropriate management on construction is necessary for keeping the cost to a minimum.

For fisheries financial support, the establishment of the financial foundation in districts and cooperatives for maximising their income is important. By doing so, reinforcement of cooperatives are to be expected which also reduces their dependency on NGOs and donors.

An appropriate evaluation should be carried out in order to adjust the project implementation for generating real economic benefits during their implementation period.

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