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## 2. Initial considerations

### **MARINE RESOURCES AND ENVIRONMENTAL, MACRO-ECONOMIC AND SOCIO-ECONOMIC ASPECTS**

Fisheries activity takes place within the national context. When governments assisted by international organizations plan development programmes including revolving funds to assist artisanal fisherfolk, the economic and social context within which the proposed activities will take place must be carefully analysed. The primary consideration must be whether the results of programme activities are in the best interests of the local fisherfolk and society as a whole. The extent and degree of exploitation of existing marine resources, the marine and coastal environment which will host the activities, the nature of particular problems facing the local fishing community, the national economy and its ability to expand its use of the products of marine and inland fisheries are all essential elements of the analysis required before embarking on fisheries projects, particularly one expected to have a major impact on local fishing communities.

#### **Marine resources**

No broad generalizations can be made about the degree of exploitation of coastal fisheries in developing countries. Some fisheries are over-exploited; some are heavily fished for highly-prized species but not others; others are under-exploited. Where in-shore fisheries are fully- or over-exploited overfishing is often the result of illegal inshore fishing by trawlers; in such cases, efforts to expand artisanal fishing can only be successful with more effective policing of the fishery. For these reasons, fisheries projects to be supported by revolving fund programmes require prior estimates of the availability of adequate resources so the maximum economic yield of the fisheries is not compromised by any fishery activities supported by credit.

### **Marine and coastal environment**

In many parts of the world, pollution of coastal waters and the coastline is a serious problem. Artisanal fisherfolk are more often the victims of pollution than the cause. Bulk carriers, tankers and other vessels often wash out their holds or pump bilges where the resulting pollution will clearly affect coastal fisheries. Rivers and the sea are often convenient dumping grounds for untreated sewage, chemical wastes and general refuse in both developed and developing countries, affecting coastal fisheries shellfish beds. In designing projects, particularly those for which substantial amounts of credit are provided, the environmental situation should be assessed and attention given to assuring that project activities do not contribute to further degradation of the environment.

Generally, artisanal fishing activities do not pose a substantial threat to the environment. Construction of wooden boats and fish-processing activities such as smoking, however, may threaten coastal forests or mangrove swamps since large amounts of wood are used as fuel for smoking and boatbuilding. In the case of the fast diminishing mangrove swamps, aquatic species dependent on their existence are also threatened, as is the ability to carry out certain types of aquaculture.

Motorization and mechanization of coastal fishing craft and gear can also have negative effects on the environment. Motorization of artisanal fishing craft and the introduction of mechanized fishing boats can result in oily residues and in increased amounts of garbage discharged in coastal waters, negatively affecting water quality and environment.

The negative environmental effects of activities supported by credit should be kept to a minimum if they cannot be eliminated. For example, alternative materials for the construction of boats, stores and fuel for smoking should be promoted. Measures which prevent or reduce negative environmental impact can be introduced: garbage bins and facilities for disposing of oily residues, anti-pollution promotion, etc.

### **Macro-economic considerations**

Important macro-economic conditions to be considered before establishing a revolving loan fund or fisheries credit programme include employ-

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ment and the labour force, demand for fish and other marine products as well as support services and facilities, in particular the marketing distribution system.

Before deciding on a particular credit programme, the availability of a skilled labour force should be ascertained and additional training requirements carefully considered. Equally important is the need to consider every possible method of employment creation, especially for women and young people.

Macro-economic conditions, such as the rate of growth of personal income, income distribution and employment levels, in large measure determine the growth in demand for desirable high-protein foodstuffs like fish. Other factors include subsidies for, and prices of, substitute protein sources (in particular meat and poultry). The availability of refrigeration is also a factor affecting the growth of demand for fish. The role assigned to fish in national and regional development plans can be crucial in expanding demand.

Depending on the size of the local market, projects having a major impact on the supply of fish can conceivably raise production enough to affect prices. During some seasons, production increases could create a glut on the national market. Regional projects may also exceed the capacity of local marketing structures to handle increased production or to provide the inputs (such as ice, cold-storage capacity and transport) required. Existing and proposed market structures should be thoroughly analysed to determine whether they can respond to changes in the overall volume of production or its composition. Export marketing requirements for fish and shellfish are often stringent. Given time, marketing structures in most countries can generally adapt to meet the needs of sectors expanding their production. This process can, however, be speeded up through careful analysis of the existing marketing system and the changes required to meet the demands created by proposed fisheries projects.

### **Socio-economic considerations**

The fishing community in a given project area usually is not a homogeneous group but a variety of socio-economic sub-groups which show

considerable differences in their position in the division of labour within the fisheries sector, in ownership, income, expenditure, savings, indebtedness, subsidiary occupations, as well as in social status, access to institutions, facilities and services, nutritional status, standard of housing and levels of education.

Prior to designing a lending programme and deciding on a credit policy, there is a need to identify properly the sub-groups within the fishing communities most in need of credit to support their economic activities.

When selecting the target group for credit programmes, the most disadvantaged group should have priority, provided that credit can make a real contribution to the improvement of their standard of living. A special sub-group to be considered for revolving funds and fisheries credit programmes are women, whose economic role has often been undervalued and ineffectively supported by development projects and programmes. The role of women in fisheries and fisheries-related economic and social activities has to be examined adequately and special credit programmes for women prepared. If self-help and non-governmental groups exist in fishing communities, they can play a role in the loan operation and in any extension services linked to it.

### **INFORMATION NECESSARY FOR OPERATING CREDIT AND SAVINGS PROGRAMMES**

Accurate information about the area where a fisheries project with a revolving loan fund component will be carried out is crucial to the design and implementation of a successful programme. A major reason for the success of informal credit arrangements is the thorough understanding by lenders of the situation in which the local fishing communities operate and of the character and capacity of individual borrowers within that community. Formal credit and savings programmes such as those supported by revolving loan funds must obtain necessary information before the programme is designed and upgrade their knowledge throughout its operation. Lack of knowledge of the local situation leads to unacceptably high default rates.

Managers, credit specialists and administrators of credit programmes need to understand the operations and financial needs of fisherfolk as fully as possible. To achieve this understanding, managers and social scientists associated with the proposed credit programme must dedicate a reasonable amount of time to interviewing knowledgeable informants in the local area, including government officials, local non-governmental leaders, such as chiefs, managers and officials of local banks, providers of informal credit and individual fisherfolk. A thorough qualitative understanding of the operations and needs of fisherfolk has to be obtained by programme personnel, including social scientists, before an attempt is made to quantify principal elements in fisherfolk's operations and needs. Past studies or reports on local fishing communities can provide an understanding of the problems fisherfolk face and the solutions they develop for them.

Project management needs the following information to tailor the design of the lending programme to the needs of fisherfolk and the institutions involved with the revolving loan fund.

Resources:

- State of the resource with respect to month, season and year, by species
- Species caught by artisanal fisherfolk, by time of the year
- Amounts caught per month, by species.

Technologies:

- Present technologies employed in catching each species
- Feasible technologies which could be introduced, both known and new to the local fishing population.

Labour arrangements:

- Number of crew, by types of boat
- Distribution of catch
- Share systems/wage payments and credit provided to crew members.

Marketing arrangements:

- Current sales channels and volume handled
- Alternative channels of interest to fisherfolk.

Income:

- Fishing income, by month and income-earning family member
- Number of days of fishing, by month

- Distribution of the catch
- Non-fishing income, by month and income-earning family member.

Production costs:

- Fuel and lubricants, by month
- Bait, by month
- Ice, by month
- Others, by month.

Assets:

- Boats, by type and value; replacement and maintenance costs
- Motors
- Sails and oars
- Nets and traps
- Other gear.

Communications:

- Education and literacy levels, by family member
- Ownership of, or access to, radio and TV and listening times
- Access to reading materials, by type and source
- Distance, time and means of transport to nearest town and bank branch.

Investment projects:

- Current projects and activities
- Proposed projects and project ideas.

Current use, requirements and sources of credit and availability of institutional savings facilities:

- Credit for purchase of productive assets
- Credit for purchase or improvement of housing and land
- Credit for consumption, education and social purposes
- Past and current experience with formal credit and institutional savings mobilization.

Institutional credit and extension facilities:

- Availability of banks, bank branches, rural banks, fisherfolk cooperatives and credit unions
- Access to technical advice and extension services provided by government agencies and non-governmental organizations.

To obtain estimates of the values of each of the indicators is less important than to understand the relationships between them. The management and research team involved in establishing a credit and savings programme must dedicate considerable effort before and during field work to discussions with fisherfolk and other community members to facilitate analysis of data collected in surveys and to make best use of the results of the analysis.

## CHECKLIST

### 1. Environment

- Will activities to be financed through credit contribute to environmental degradation? For example, will the use of timber for construction of boats or workshops, or for fish smoking, destroy coastal forests and mangrove swamps? Will coastal waters be polluted by oily residues from boat engines?
- If so, how can activities be modified to prevent this (use of alternative materials for boat building, house construction, fish smoking) and/or counter-measures be incorporated into the project (tree planting, rehabilitation of mangrove swamps, provision of garbage bins and facilities for collecting and disposing of oily residues from fishing boats, and by anti-pollution promotion through videos, posters and leaflets)?

### 2. Resources

- What is the status of the aquatic resources to be affected by the activities to be financed on credit: under-exploited, fully exploited, over-exploited?
- Could these activities eventually lead to an economic and/or biological over-exploitation of resources, thus compromising the maximum economic yield of the fisheries as well as the biological sustainability?

### 3. Macro-economic aspects

- Do the activities to be supported by credit create employment in rural areas, particularly for disadvantaged sections of the rural population, including women and young people?
- Do the activities to be supported by credit require training and extension support or is skilled labour already available?



- How is the demand for fishery products affected by income distribution and employment levels, prices of substitute protein sources and subsidies?
- How will the existing fish handling, processing and distribution system be affected by increased and/or diversified supply of fish and marine products as a result of credit programmes? Are structural adjustments necessary?

#### **4. Socio-economic aspects**

- Does the credit programme incorporate appropriate mechanisms to aid the disadvantaged sections of the fishing community, such as women and young people?

#### **5. Information requirements**

- Which of the following information is readily available and which is yet to be collected before designing an appropriate credit delivery and recovery system:

##### **Resources:**

- State of the resource with respect to MSY, by species
- Species caught by artisanal fisherfolk, by the time of year
- Amounts caught per month, by species and value

##### **Technologies:**

- Present technologies employed in catching each species
- Feasible technologies which could be introduced, both known and new to the local fishing population

##### **Labour arrangements:**

- Number of crew, by types of boat
- Distribution of catch
- Share system/wage payments and credit provided to crew members

**Marketing arrangements:**

- Current sales channel(s) and volumes handled
- Alternative channels of interest to fisherfolk

**Income:**

- Fishing income, by months and income-earning family members
- Number of days of fishing, by months
- Distribution of catch
- Non-fishing income, by months and income-earning family members

**Production costs:**

- Fuel and lubricants, by months
- Bait, by months
- Ice, by months
- Others, by months

**Assets:**

- Boats, by type and value; replacement and maintenance costs
- Motors
- Sails and oars
- Nets and traps
- Other gear

**Communications:**

- Education/literacy levels, by family member
- Ownership of, or access to, radios and TVs and listening times
- Access to reading materials, by type and source
- Distance, time and means of transport to nearest town and branch bank

**Investment projects:**

- Current projects and activities
- Proposed projects and project ideas

**Current use, requirements and sources of credit and availability of****institutional savings facilities:**

- Credit for the purchase of productive assets
- Credit for purchase or improvement of housing and real estate

- Credit for consumption, education and social purposes
- Past and current experience with formal credit and institutional savings' mobilization

**Institutional facilities:**

- Availability of banks, bank branches, rural banks, fishermen's cooperatives and credit unions, etc.
- Access to technical advice, extension services and fisherfolk organizations.



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