



**New Partnership for  
Africa's Development (NEPAD)  
Comprehensive Africa Agriculture  
Development Programme (CAADP)**



**Food and Agriculture Organization  
of the United Nations  
Investment Centre Division**

## **GOVERNMENT OF THE LIBYAN ARAB JAMAHIRIYA**

### **SUPPORT TO NEPAD–CAADP IMPLEMENTATION**

**TCP/LIB/2902 (I)  
(NEPAD Ref. 06/46 E)**

**Volume V of V**

### **BANKABLE INVESTMENT PROJECT PROFILE**

#### **Fisheries Development Project**

*June 2006*



## **LIBYA: Support to NEPAD–CAADP Implementation**

**Volume I: National Medium–Term Investment Programme (NMTIP)**

*Bankable Investment Project Profiles (BIPPs)*

**Volume II: Food Security Scheme (Wheat, Dates & Olives, Seed Production)**

**Volume III: Warehouse for Grading, Packing and Storage**

**Volume IV: Great Man–Made River Distribution Facilities**

**Volume V: Fisheries Development Project**



## NEPAD–CAADP BANKABLE INVESTMENT PROJECT PROFILE

**Country:** Libya

**Sector of Activities:** Fisheries

**Proposed Project Name:** **Fisheries Development Project**

**Project Area:** Coastal belt area around Tripoli, comprises four regional administrative areas (Tajura–Nawahi, Tripoli, Jaffara and part of Zawia)

**Duration of Project:** 5 years

**Estimated Cost:** Foreign Exchange ..... US\$108.5 million  
Local Cost..... US\$53.4 million  
**Total .....US\$161.9 million**

**Suggested Financing:**

<i>Source</i>	<i>US\$ million</i>	<i>% of total</i>
<i>Government</i>	78.0	48
<i>Financing institution(s)</i>	83.9	52
<i>Beneficiaries</i>	–	–
<i>Total</i>	<i>161.9</i>	<i>100</i>



**LIBYA:**  
**NEPAD–CAADP Bankable Investment Project Profile**  
***“Fisheries Development Project”***

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### Currency Equivalents

(1 June 2006)

Local Currency	=	Libyan dinar (LYD)
US\$1.00	=	LYD1.29
LYD1.00	=	US\$0.775

### Abbreviations

AEFF	Authority for the Encouragement of Foreign Fund
CAADP	Comprehensive Africa Agricultural Development Programme
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
IDB	Islamic Development Bank
IFAD	International Fund for Agricultural Development
LOA	Length Overall
MBRC	Marine Biology Research Centre
MSY	Maximum Sustainable Yield
NAFI	National Authority for the Fisheries Investment
NCA	National Centre for Aquaculture
NEPAD	New Partnership for Africa’s Development
NMTIP	National Medium–Term Investment Programme
SMR	Secretariat of Marine Resources
UNDP	United Nations Development Programme



## I. PROJECT ORIGINS

I.1. The *National Authority for Fisheries Investment* (NAFI) was created in 2004 with a mandate reflecting the importance given to developing the country’s fishery sector. Its main objectives are to increase food production by utilizing untapped fishery resources, to reduce dependency on food imports, to provide gainful employment to nationals and thus improve the socio-economic status of traditional fishers and fishing communities. It is also charged with conducting studies on the marine environment and the fish stocks; implementing the laws and regulations governing the harvesting, processing and handling of fish products; constructing essential marine infrastructure and planning the development of the fisheries sector through the identification of problem areas and solutions.

I.2. Factors that presently constrain fishery production include the following:

- ***Insufficient knowledge of the fisheries resource base:*** In spite of the results of previous studies concerning fish stocks (1974, 1976, 1994), the resource base is not yet fully defined, to the effect that no sound overall fisheries development and management strategies can be formulated.
- ***Deficient monitoring of fisheries:*** A sound fisheries development and management strategy is impossible without an effective fisheries statistical system capable of supplying a basis for monitoring, planning and management of the sector in the long-term.
- ***Insufficient capabilities of fisheries institutions:*** The fisheries institutions and their employees are lacking the experience to establish comprehensive and executable systems to cater to the medium/long-term requirements of fisheries and aquaculture development and management.
- ***Lack of fish processing and marketing policies and means:*** The socio-economic productivity of fisheries does not depend only on appropriate management policies and efficient fishing activities. It also rests on effective fish processing and marketing operations. In this later case, the subsector is undoubtedly confronted by some important problems and a considerable work is required to identify markets for fish products, to develop new products and to co-ordinate market development with the increasing supply from both marine fisheries and aquaculture.
- ***Stagnant aquaculture:*** The development of marine aquaculture is further constrained by the lack of a national program of commercially-oriented research and development and of specialist support services in the fields of fish disease, environmental control, nutrition and hatchery production.
- ***Inappropriate training of fishermen:*** There are no fisheries without fishermen and Libya lacks fishermen to such an extent that national boat owners rely heavily on foreign labour to man their fleets.

I.3. The NAFI is the government body that is committed to the principle of fishery resource conservation. Such commitment, however, is easy to sustain at present while stocks are underfished and planning is centred on the logistics of fleet expansion and the provision of infrastructure. As maximum sustainable yield draws nearer, however, the NAFI will be required to restrain the momentum of rapid development. A “*National Fisheries Development Program*” is needed for the optimal development and management of the fish resources, i.e. the assessment of fish stocks, the monitoring of the effects of expanding fisheries, the introduction of higher processing and marketing

skills, and the planning and development of aquaculture. Such program would take into consideration critical national development priorities, with particular emphasis on transfer of technology, economic diversification and rehabilitation of the fisheries industry, while paying due attention to environmental concerns. Within this context, the project would lay emphasis on the activities designed to remove or lessen the major constraints to the fishery sector inhibiting its optimal and sustainable development.

## II. GENERAL INFORMATION – THE ECONOMY

II.1. The economy of Libya is dominated by the oil sector. Over the last four decades oil has fundamentally changed the country from one based largely on agriculture to one in which agriculture is of comparatively minor significance. By the 1980s, hydrocarbons were accounting for about two-thirds of gross domestic product (GDP) and virtually all of the country's export earnings. Although the sector GDP contribution now amounts to about a third of the total, it still earns the country over 95 percent of its foreign exchange. The contribution of service industries to national output has shown a marked increase in recent years and almost balances that of oil in GDP terms. The GDP contribution of the agriculture and fisheries sectors, on the other hand, remained weak.

## III. THE FISHERIES SECTOR

III.1. The fisheries catch in Libya comprises four major activities: artisanal coastal fishing, *lampara* fishing (a technique using lamps to attract the fish), coastal trawling and tuna fishing. Sponge fishing is a minor area of production. Most of the catch is taken by artisanal boats working with nets (trammel nets and gillnets) or hooks (long lines and hand lines) and by the *lampara* fleet fishing for small pelagic species. A total of 1,866 active artisanal crafts were counted during the national landing site survey conducted in 2000. These crafts are based at 135 beach, anchorage, and harbour landing sites along the coastline, with heavier concentrations through the western stretches. Seventy-six landing sites are permanent (all year operation) bases and 59 are seasonal. Artisanal fleet units include 1,300 crafts of 10 m length overall (LOA), while 566 are of >10 m LOA. Approximately two-thirds of the smaller craft are motorized, usually with outboard engines in the 10–35 hp range. The larger units are decked vessels and are all fitted with inboard engines. Most work as gill-netters, except for those used in the *lampara* fishery.

III.2. Tuna fishing is carried out mainly using an industrial fishing fleet (nine long-liners and six purseiners) and *tonnara*, which is a set of nets extending 3–5 km out from the coast. *Tonnara* fishing was much more common in the past, with as many as 18 stations reportedly in operation before World War II. Five stations now remain, only two of which were active during the 2004 season (May–July). These are located at Zreq and Dzirah, 200 km east of Tripoli.

III.3. The industrial fishing fleet (excluding the tuna fishing fleet) is composed of 128 units, which are steel and wood stern trawlers. Lengths vary from 16 to 33 m LOA and engine power ranges from 165 to 950 hp. In addition, most are owned privately by either individuals or partnerships.

III.4. Sponge harvesting was a major activity during the 1950s and 1960s, especially along the eastern part of the coast between Benghazi and Tobruk. After a period of drastic decline owing to disease outbreaks in the beds and the withdrawal of labour from the fishery, sponge harvesting is slowly beginning to pick up again.

III.5. Total production from Libyan waters was reported to be 38,510 metric tons (latest official figure) in 2004, with an estimated value of LYD97m. This production consisted of around 16,110 mt of small pelagic (sardine, mackerel, horse mackerel, bogue, etc.), some 2,000 mt of blue fin tuna and about 18,400 mt mixed demersal species (mainly red mullet, breams, groupers, amberjack, common dentex, triggerfish, common pandora, octopus, cuttlefish, squid, shark), in addition to 2,000 mt of other fishes.

III.6. Twenty-four marine fishery cooperatives (*jamaias*) have been established at major fishing centres along the coast with the aim of providing supplies of essential gear and spare parts to the artisanal sector. Membership in local *jamaias* is open to all fishers who have valid boat licenses issued by the fishery authorities.

III.7. **Catch utilization.** All catches in Libya are sold and consumed fresh in large urban market areas, except a part of the small pelagics, which goes to canning for the domestic market or as fish meal during high peak production. Commercialization facilities for receiving, handling and distribution of fish have improved considerably, especially over the last few years after privatization of marketing chains. Most major landing and marketing centres are now served by ice plants and cold and chill storage facilities.

III.8. Seven fish canning plants, which were established during the last two decades and belong to state companies, can process tuna and small pelagics, with a daily (raw material) capacity of 50 tons of tuna, 65 tons of small pelagics and 130 tons of fish meal. None of these plants seems to operate in a satisfactory condition, however, due to problems in the supply of raw material and the poor state of equipment in some cases. Although the Government of Libya decided in the 1990s to engage in a broad privatization policy, which aims to progressively remove the state from the productive sector, privatization is still underway for these canning plants.

III.9. Concerning the export of fisheries products, only around 2,000 tons of blue fin tuna are exported yearly to international markets (mostly to Japan) and small quantities around 3,000 tons of high value fish, which are exported to neighbouring countries. In general, the export of fish products is still very limited, due to gaps in legislation covering requirements adequately, a laboratory network for sampling of fish products, and an upgrade of export facilities up to international standards.

III.10. **State of industry.** Although the fisheries authorities have devoted substantial resources to improving the harvest and post-harvest sectors, particularly in the areas of landing site and harbour development and processing plants, national fisheries still perform well below their true potential.

III.11. Until recently there has been a lack of reliable information on the following basic aspects of the industry: the overall resource picture; the composition and gear of the national fleet; the capacity to monitor fishing practices; essential socio-economic features of the artisanal fishery; operation of the post-harvest sector, product distribution and marketing. Although a start has now been made to correct this situation, adequate systems are still not in place for gathering and reporting routine fisheries statistics and information.

III.12. **Economic role of industry.** The considerable growth in productive and processing capacity over the last ten years is not yet fully reflected in the overall volume or value of outputs of the fisheries industry. The primary and secondary productive employment of the national fisheries sector provides for only a very small fraction (around 1 percent) of the total national labour force, now reckoned to be a little over 1.6 million people. Likewise, the estimated contribution of fisheries to agricultural GDP is fairly negligible, standing at around 7 percent or so. To put this into overall

perspective, in a national economy heavily dominated by the oil sector, the entire agriculture and fishery sector itself only contributes an estimated 5 percent to total GDP.

III.13. **Demand.** Official reports indicate that the demand for fish products in Libya is showing a definite increase. There is, however, a lack of specific information on patterns of fish consumption nationally or regionally. In 2004, average *per capita* consumption was recorded at 7 kg. In general, the demand for domestically produced food fish could continue to grow. Upgraded management of product quality in processing plants and improved market facilities could considerably encourage this trend. Demand for fish meal is also likely to show a steady increase in response to continuing pressure to expand production in local animal feed plants to serve the poultry industry.

III.14. **Research.** Fisheries research is under the responsibility of the *Marine Biology Research Centre* (MBRC), which is located on the coast at Tajura. The MBRC now functions as an organ of the Fisheries Authorities with broad terms of reference to conduct research and studies related to the development and use of national marine resources and to provide technical advice and consultation on marine resources issues. Although its potential as a research and development (R&D) agency for the marine resources sector is considerable, the MBRC’s ability to fulfil this mandate and to operate its research vessel effectively is severely limited by lack of proficient scientists and budget shortages.

III.15. **Development prospects.** The situation of fish stocks has been examined in light of the latest studies. For the western part of Libya, between the Tunisian border and Misurata, scientific investigations carried out in 1993–94 under the FAO–supported LIBFISH project, concluded that the demersal stocks were nearing full exploitation if the catches of unlicensed foreign fishing fleets operating in and out of more remote sections of Libyan waters were counted. For the central and eastern part (from Misurata to the Egyptian border), scientific investigations organized in August 2003 by the MBRC in collaboration with a Greek research institute concluded that the demersal stocks were healthy and that there were potential fish stocks that could be exploited.

III.16. Acoustical survey work carried out in 1994 along the Libyan coast resulted in an estimate for small pelagic biomass in Libyan waters of some 56,500 mt, with a MSY for small pelagics of 21,500 mt. Small pelagic fisheries could expand slightly above the current annual catch level.

III.17. In general, Libya shows potential for development of its fishing sector with stocks that could be better exploited and the presence of large quantities of blue fin tuna in its waters. In addition, the fishery sector of Libya could modernize to increase the efficiency of the vessels and of the handling and storage practices of the catches, including processing and distribution of fish.

III.18. National planning objectives call for further diversification of the economy, particularly in food production, with an obvious role for fisheries and aquaculture. The contribution of the marine resources sector to domestic employment and food supplies could be increased considerably, provided that sustainable resource development remains the guiding principle in the planning and management process.

III.19. **Fisheries management.** Between 1988 and 2000 the central authority for the fisheries sector was the *Secretariat of Marine Resources* (SMR), a powerful institution that grouped all the administrative and technical functions required to manage and develop the fisheries industry. During this period, the initiatives of the SMR backed by significant input from the state fostered the development of the sector. As an indicator, production grew from approximately 6,000 tons in 1988 to around 39,000 tons in 2000. In 2000, as result of the decentralization policy, the SMR was dissolved and some of its functions (fleet management, enforcement of regulations, management of port structures, etc.) were transferred to regional authorities (*Shabyat*).

III.20. This new arrangement let fisheries management fall under two management levels. At the *Shabya* level (there are seventeen coastal *Shabyat*) there is a SMR responsible for all the fishing activities under its jurisdiction, each directed by a secretary appointed by selection from among the fisheries delegates of the communes which comprise the *Shabya*. The fisheries commune secretaries make up the *Shabya* fisheries committee, which decides and recommends on fisheries measures and activities within the *Shabya*. The commune secretaries have the role of both local fisheries political representatives and fisheries administrators. At the central level, the NAFI (see I.1 and I.3) is responsible for planning; management, research and development activities for the fisheries and aquaculture sector. Constituent agencies of NAFI include the MBRC and the *National Centre for Aquaculture* (NCA). Within each of these bodies, there are departments for planning and follow-up responsible for reporting on the execution of plans and the achievements of goals and objectives.

III.21. **Legislative framework.** The regulatory tools through which the fisheries authorities seek to secure fisheries development and management aims are codified as Law 14 of 1989 *Concerning Utilization of Marine Resources* and its supplements, Decision 71/1991 *Concerning the Technical Interpretation of Law 14 of 1989* and Decision 8/1991 which provides *Technical Explanations and Specifications for the Implementation of Law 14*.

#### IV. PROJECT AREA

IV.1. The project is national in nature. The fisheries authorities will identify requirements for a development program in order to strengthen capacity for both planning and managing fisheries development and for conducting the basic research upon which rational planning relies. The specific details of the targeted activities of this project will be provided in due course in a project document.

#### V. PROJECT RATIONALE

V.1. The expansion of the trawler and inshore fleets has been proceeding swiftly and is likely to follow the same trend in the future, with the application of increasing extractive pressure on fish resources. Fisheries management is already faced with major and immediate problems in formulating highly technical proposals, in planning and implementing plans for expanded fishery sector (capture and aquaculture). Failure to provide support to fisheries management during this crucial period could have serious environmental consequences.

V.2. The marine fisheries component of the project will be undertaken while continued and rapid growth in investment is expected in the catch, storage, processing, transportation and retail sector, as well as in aquaculture activities. Despite great efforts by fisheries management to train technicians in the appropriate fields, there will undoubtedly be a shortage of skilled national manpower to operate an expanding and increasingly technology-orientated sub sector. Similarly, scientific expertise will need to be in place to assure that resources are not over-exploited, and it will be necessary to ensure that marketing and production are matched correctly. The absence of suitably proficient advisers, managers, and trainers during this critical period could lead to the risk of over-exploitation of fish stocks and under-utilization of investment capital. In a similar way, the persistence of an insufficient number of appropriately skilled Libyan fishermen would preserve the allocation of a substantial portion of fisheries revenues to foreign fishermen, i.e. the export of an important fraction of the marine resources and, simultaneously, the encouragement of unemployment in the country.



V.3. The project would assist in helping fishers use their assets profitably, increase production and productivity, contribute to national food security, reduce fish product imports and enhance fish product exports.

## VI. PROJECT OBJECTIVES

VI.1. The broad development objective of the project is the establishment of a national capability in marine resource utilization and management leading to the rational and efficient exploitation of the fish resources of the country on a sustainable yield basis, through marine fisheries and aquaculture, and through the development of an effective post-harvest structure.

VI.2. The immediate objectives of the project are to:

- Strengthen the capability of fisheries authorities to control and manage the marine fisheries and aquaculture activities of the subsector for development on a sustainable basis.
- Develop the capacity of the MBRC to provide effective technical advisory and management services in marine resource utilization, fishermen’s training, fish processing and marketing and aquaculture to the fisheries authorities.
- Improve production and productivity of fishing fleets.
- Improve fishermen’s skills to optimize use of the resources.
- Improve product quality and increase export performance.

## VII. PROJECT DESCRIPTION

VII.1. The project is expected to last five years and comprises five components.

### **Component 1: Development of Marine Physical Infrastructure**

VII.2. The need to develop the existing marine infrastructure and construct additional industrial fishing harbours and artisanal fishing ports at sites along the coastline was considered one of the priorities in the development plan 2006–2010, which was prepared by NAFI and forwarded to the Secretariat of Planning for adoption and insertion into the national development plan.

VII.3. ***Subcomponent 1.A: Rehabilitation and development of existing fishing harbours infrastructure.*** There are several major fishing ports that can harbour small and large-sized vessels. The major weaknesses of these fishing ports are harbour capacity; maintenance of berth facilities and inadequate services for vessels (refuelling, freshwater supply, cold storage facilities, repair and maintenance services, administrative services). This activity will target 10 major landing sites along the coastline.

VII.4. ***Subcomponent 1.B: Construction of new fishing harbours and mersa (anchorages).*** This subcomponent will target the construction of two new industrial harbours and two new artisanal ports.

VII.5. ***Subcomponent 1.C: Post-harvest activities.*** In Libya none of its landing sites provides a wholesale market; sales of fresh fish in major landing sites take place in open air floors and handling



of catches does not meet international standards for hygiene. In order to improve this situation the proposed investment project is expected to provide at least three of the major fishing harbours with adequate wholesale market floors that enable fishing vessels to discharge directly to wholesale markets, with provision to be made for box washing and icing of fish.

VII.6. The details for the above activities of this component will be provided later after the adoption of the NAFI development plan by the higher authorities.

### **Component 2: Resources and Technical Advisory Services Support**

VII.7. As already indicated, the MBRC is the principal agency for research and technical advisory support to fisheries sector authorities. The establishment of an effective fishery research capacity in the MBRC, through technical assistance and intensive in-service training, should therefore be regarded as the core of this project. A conventional training-oriented stock assessment package of studies should be scheduled to cover all Libyan waters (from the shore to the continental slope of 600 m), using the MBRC research vessel Nour and chartering a 14–15 m gill-netter, including other related biological and environmental studies. For this mission the vessel Nour will need major repair work, including electrical, mechanical and body repairs and new fishing gear.

VII.8. Main activities under this component will include:

- Analyze earlier and new research data, estimate sustainable harvesting levels, prepare thematic fisheries maps and charts, including the sea-floor maps topography and nature, the seasonal distribution and relative abundance of the commercial fish resources, and fishing maps for the exploitation of particularly promising fishing grounds. Also include aquaculture resource maps and charts.
- Run a framework survey for the entire coastline, design an improved data collection system for the estimation of fish landings, fish efforts, and discuss with the authorities concerned the necessary long-term resource assessment and surveillance activities.
- Design and implement field surveys of the Libyan coastline to investigate the present socio-economic structures and the ways in which these have been changing in response to recent economic history.
- Develop the capacity of MBRC to provide comprehensive technical advisory and management services in marine resource development to sector authorities. This capacity will relate not only to fish stock assessment and appraisal of aquaculture potential but also to fishery policy proposals, fish processing and marketing, fishermen’s training, coastal communities studies and coastal pollution problems. Such capacity building will be achieved entirely through in-service and fellowship training.
- Rehabilitate MBRC facilities and laboratories and supply equipment wherever needed.

### **Component 3: Market and Product Development Requirements**

VII.9. Under this component, the project will advise authorities on how to upgrade existing markets, handle the catches and meet international standards of hygiene. This will be achieved by the following:

- Collect, complete and actualize the information on existing products and market records.

- Actualize domestic consumer surveys.
- Review international market potential and carry out market studies for existing or possible fishery and aquaculture products.
- Design fish quality control standards for fresh and frozen fish and canned fish products for internal and export markets and train the required specialist in related fields.

#### **Component 4: Institutional Strengthening**

VII.10. Under this component, the project will work to strengthen the capability of fisheries management to control and manage the marine fisheries and aquaculture activities for their development on a sustainable basis by achieving the following:

- Making use of project research monitoring outputs, advising authorities on appropriate management strategies, including efficient monitoring of the fisheries through a statistical data collection system related to efforts, captures, costs and profits in order to ensure the sustainable utilization of marine resources.
- Reviewing existing fisheries legislation and licensing policies and promoting dialogue between management and private fishing interests to provide effective consultation with industry.
- Training fisheries management staff by providing overseas fellowships and in-service training.

#### **Component 5: Training Libyan Fishermen for the Coastal and Industrial Fisheries**

VII.11. This component would seek to review the existing training schools (facilities and equipment, programs and past results) and to set up fishermen training centres in at least five major landing sites to provide skills needed in fishing techniques.

VII.12. In addition, it will design, fund and supervise implementation of an improved program for the recruitment of appropriate trainers and trainees and the theoretical and practical training on shore and at sea in fishing technologies, operations, marine mechanics and safety at sea.

## VIII. INDICATIVE COSTS

VIII.1. A preliminary estimate of project costs reached approximately US\$161.9m over the five years of project implementation. About 33 percent of these costs will be in local currency, while the balance will be in foreign exchange. Indicative summary baseline costs are shown below.

Project Baseline Costs Summary by Component					
Component	Cost ('000 US\$)			% foreign exchange	Total cost ('000 LYD)
	Local	Foreign	Total		
1. Development of Marine Physical Infrastructure	50,000	100,000	150,000	67	199,500
2. Resources and Technical Advisory Services Support	1,500	4,500	6,000	75	7,980
3. Market and Product Development Requirements	150	750	900	83	1,197
4. Institutional Strengthening	500	1,500	2,000	75	2,660
5. Training Libyan Fishermen for the Coastal and Industrial Fisheries	1,000	2,000	3,000	67	3,990
<b>Total baseline costs</b>	<b>53,150</b>	<b>108,750</b>	<b>161,900</b>	<b>67</b>	<b>215,327</b>

## IX. PROPOSED SOURCES OF FUNDING

IX.1. The government of Libya, donors and the private sector are expected to participate in the financing of this project. The Libyan Government expects to meet up to 50 percent of the cost of component 1 and 25 percent of the costs of the other components of the project. The remaining share of project costs (about 52% of the total) are expected to be met by a number of donors and development agencies or financial institutions, interested in food security projects.

## X. PROJECT BENEFITS

X.1. The ultimate beneficiaries of the project will be the Libyan people, either directly as consumers of fishery products or indirectly through the economic benefits of increased exports or import substitution. Benefits will also include promotion of small-scale as well as industrial fisheries development, increases in production, generation of employment, increases in local consumption maximization of investments and minimization of post-harvest wastes. The immediate beneficiaries are the staff of the fisheries authorities, the staff of the MBRC and the fishermen themselves.

## XI. IMPLEMENTATION ARRANGEMENTS

XI.1. **National level.** The NAFI is the co-coordinating and implementing agency for the fishery sector in Libya and will hence be the lead agency for implementation of the project. The MBRC will serve as the host institution for the project. A coordinating unit will be established within the MBRC, and a National Project Director and counterpart professional staff will be available on a permanent basis for participation in all project activities. The unit will report directly to the NAFI Secretary.

XI.2. **Regional (Shabya) level.** Specific arrangements with the regional fisheries authorities will be established before the work starts to ensure full cooperation for implementation of project activities.

XI.3. The fishermen’s associations and cooperatives will provide all support needed by the project to train fishermen at the *Shabya* level.

## **XII. TECHNICAL ASSISTANCE REQUIREMENTS**

XII.1. For accelerating implementation of this development program, international technical assistance will be needed, in the first instance, for carrying out more detailed design of the project’s objectives and activities and for finalizing the project document.

## **XIII. ISSUES AND PROPOSED ACTIONS**

XIII.1. Since the project is in its preliminary stages, further attention and action would be required to deal with pertinent issues such as:

- Special arrangements and consultations with central authorities, regional authorities, fishermen’s associations and other stakeholders for preparing the project document.
- Complete evaluation of the MBRC research vessel Nour as to its suitability for doing the marine research work prior to launching project activities.
- Special arrangements with concerned authorities relating to the government’s investment share in financing components 2 to 5 of the project, which include R/V Nour and gill-netter operational costs and further support in the form of administrative and counterpart staff, office and laboratory space and operating costs.

## **XIV. POSSIBLE RISKS**

XIV.1. The effectiveness of the project will depend to a large extent on:

- Environmental and biological factors permitting continuing exploration.
- Availability of research vessels at the requested time, of the resource assessment team’s access to survey grounds.
- Availability and access to information and background data required by project activities.
- Availability of counterpart staff, trainees and facilities for staff training.