

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT IDENTIFICATION DOCUMENT FACESHEET (PID)				1. TRANSACTION CODE Revision No. _____ <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete			DOCUMENT CODE 1			
2. COUNTRY/ENTITY Sultanate of Oman				3. PROJECT NUMBER 272.0101.4						
4. BUREAU/OFFICE ANE			A. Symbol AA/ANE	B. Code <input type="checkbox"/> N		5. PROJECT TITLE (maximum 40 characters) Fisheries Development and Management				
6. ESTIMATED FY OF AUTHORIZATION/OBLIGATION/COMPLETION A. Initial FY <input type="text" value="8"/> <input type="text" value="9"/> B. Final FY <input type="text" value="9"/> <input type="text" value="4"/> C. PACD <input type="text" value="9"/> <input type="text" value="6"/>				7. ESTIMATED COSTS (\$000 OR EQUIVALENT, \$1 =)						
				FUNDING SOURCE			LIFE OF PROJECT			
				A. AID			40,000			
				B. Other U.S.			1.			
							2.			
C. Host Country			15,500							
D. Other Donor(s)										
TOTAL			55,500							
8. PROPOSED BUDGET AID FUNDS (\$000)										
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. 1ST FY		E. LIFE OF PROJECT				
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan			
(1)	669	700		12,000		40,000				
(2)										
(3)										
(4)										
TOTALS				12,000		40,000				
9. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)						10. SECONDARY PURPOSE CODE				
600		097		840						
11. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)										
A. Code		RGEN		TNG		ENV				
B. Amount										
12. PROJECT PURPOSE (maximum 480 characters)										
TO: 1) Provide an institutional capability within the Ministry and the private sector over the long term to manage, utilize and conserve their marine resources and 2) provide operational staff assistance to the Ministry over the medium term.										
13. RESOURCES REQUIRED FOR PROJECT DEVELOPMENT										
Staff: Fisheries expertise in S&T/AGR; training expertise under Blanket Ordering Agreement with URI; assistance on WID and evaluation issues from AID/W; local assistance with accounting and administrative procedures.										
Funds: Mission funds.										
14. ORIGINATING OFFICE CLEARANCE		Signature <i>Duncan R. Miller</i>				15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY				
		Title Duncan R. Miller A.I.D. Representative		Date Signed MM DD YY 09 27 88						
16. PROJECT DOCUMENT ACTION TAKEN <input type="checkbox"/> S = Suspended <input type="checkbox"/> A = Approved <input type="checkbox"/> D = Disapproved CA = Conditionally Approved DD = Decision Deferred				17. COMMENTS						
18. ACTION APPROVED BY		Signature		19. ACTION REFERENCE		20. ACTION DATE MM DD YY				
		Title								

PROJECT IDENTIFICATION DOCUMENT

Fisheries Development and Management

I. INTRODUCTION

For centuries Oman has turned to the sea for transport and food. The 200 mile Extended Economic Zone along Oman's 1,700 kilometer-long coast contains a diverse wealth of marine resources. Commercial fishing has been a tradition of coastal Omanis, who traded dried fish in the country's interior in exchange for dates and other staples. More recently, large industrial fishing operations have exported seafood to markets in the Arabian Gulf, Europe, the Far East and the United States. After oil, fisheries have become the second largest export earner of foreign exchange and this year have more than doubled 1987's export figures.

With the ascension to power in 1970 by Sultan Qaboos bin Said, Oman embarked on an ambitious, accelerated program of economic and social development. Reflecting the long-standing friendly relations between the two countries and recognizing Oman's strategic geopolitical position, Oman and the United States established the Omani-American Joint Commission (OAJC) in 1980 to further the economic development goals of the country. Since that time, the OAJC has focused on a few, high-priority development sectors, including fisheries and human resources. In 1982, the Fisheries Development Project was signed with the purpose of improving the institutional capability of the Directorate General of Fisheries (DGF), within the Ministry of Agriculture and Fisheries ("the Ministry"), while contributing toward the goals of promoting fisheries as a non-oil source of income and promoting the welfare of traditional fishermen. Over the past five years the project has provided over 700 person-months of technical assistance in the high priority fisheries programs of statistics, extension, marketing and research. Under a complementary training project, 15 Omanis have received short-term technical training and 12 scholastic programs in fisheries-related disciplines have been funded.

In 1987, the Fisheries Development Project underwent an independent evaluation to assess its impact on the institutional development of the DGF. Although much progress had been made in the establishment of ongoing programs in statistics, extension, marketing and research, achievement of the project purpose remained severely restrained by a lack of trained and experienced Omanis. It was recognized that the role of the project advisors had been mostly operational, instead of advisory.

The evaluators recommended that the OAJC revise its strategy in fisheries to undertake a major long-term commitment to the sector, with an emphasis on training over a five to ten year period. The programs established under the Fisheries Development Project will therefore be continued in a follow-on, or second

phase, project, which will properly recognize the operational role of technical advisors in these various high priority fisheries programs, while emphasizing the need to train Omanis to fill these positions. Under a third phase project, there will be a shift in the role of the advisors from "operational" to "advisory" to finalize the institutional development needs of the DGF and to integrate the newly trained Omanis into operational positions in the public and private sectors.

This Project Identification Document presents the rationale for the development of the Fisheries Development and Management Project (FDMP). The FDMP is a second phase, follow-on project to the Fisheries Development Project. The FDMP will bridge the establishment of high priority programs under the first project to the time when qualified, trained Omanis are available to manage these programs with limited technical advisory services under the third project. Because of the time requirements of long-term (academic) training, often to the Masters and Ph.D. levels, and the tremendous need for training at all levels within the sector, the FDMP will have a project life of approximately eight years.

II. PROJECT FACTORS

A. Conformity with Oman's Strategy/Programs

Recurring themes in Oman's past two decades of development planning and economic growth have been the need to increase and diversify revenues among non-oil sources, the importance of rational utilization and conservation of national resources and "Omanisation," i.e., the training of Omanis to fill responsible positions in the public and private sectors. These themes are expressed in governmental decrees at the highest levels, stated in major planning documents such as the Third Five Year Development Plan (1986-1990) and referred to repeatedly by senior Omani officials responsible for managing their country's development.

Among the long-term objectives articulated in Oman's current Development Plan are: "diversification of sources of national income by developing new non-oil sources"; "conservation of the environment"; "encouragement of the private sector"; and "development of human resources to enable Omanis to undertake their proper role in reaching their economic potential." Among specific objectives and policies for the fisheries sector, the plan assigns the top priority to "enhancing the economic development of fishermen," as well as constructing landing and cold storage facilities. Examples of the Government of Oman's commitment to the fisheries sector to date include the provision of some basic infrastructure (roads, cold stores, power stations) for fisheries development, a program to support traditional fishermen in purchasing small boats and engines, and a generally favorable business climate for domestic and foreign investment in the sector. Emphasizing that economic development must not be at the expense of future generations' participation, the Government

is committed to conservation of its marine resources.

The FDMP will contribute to these objectives by providing technical assistance to public sector programs (statistics, extension, marketing and research), by addressing the information needs of the private sector and by providing training to officials of both sectors.

Several factors have discouraged the development of commercial fishing in Oman: an urgent need for training and educational programs at all levels of the fisheries public and private sector; a need for expanded infrastructure, including additional fisheries harbors and improved fish landing facilities and cold storage facilities; a Government policy allowing only Omani fishermen to crew commercial vessels; and a lack of feasibility studies and reliable data on fish stocks to encourage investment in commercial fishing operations.

B. Relationship to AID Strategy

AID's strategy, as articulated by the OAJC in its CDSS, SPS and Action Plan, has included human resources development and rational management of the fisheries sector. Two ongoing projects nearing completion are the Scholarship and Training Project (1983-1990) and the Fisheries Development Project (1982-1990). Under the former, approximately \$1.0 million in short-term fisheries training programs have been undertaken; under the latter, technical assistance has been provided in the major subject areas of fisheries research and stock assessment, establishment of a national statistical data base for fisheries, extension services to traditional fishermen and development of a marketing strategy for increased domestic and export sales of Omani seafood products. Over the past six years, the OAJC's fisheries goals have been to develop Oman's fisheries as a major source of non-oil revenue and to promote the welfare of Oman's traditional fishermen. The recently completed second interim evaluation of the Fisheries Development Project made firm recommendations for continued long-term technical assistance in the fisheries sector, along with a major emphasis on appropriate training for public and private sector officials.

The proposed FDMP responds to the following AID policy priorities: **Private Enterprise Development** (AID Policy Paper, March 1985) - The FDMP will finance feasibility studies and generate scientific data to assist potential domestic and foreign firms in their investment decisions. In order to encourage more efficient use of labor, discussions with the Government will include its boat/engine subsidy program and its policy on foreign crews. A private sector liaison office within the Ministry will facilitate cooperation between the Government and private investors. **Trade Development** (AID Policy Paper, July 1986) - Marketing strategies to promote the export of seafood products will allow Oman to diversify its fisheries/agricultural and industrial base in a sector where it has a comparative advantage. **Environment and Natural Resources** (AID Policy Paper, April

1988) - The stock assessment and marine research programs supported under the FDMP at the Marine Sciences and Fisheries Center will promote the conservation and protection of Oman's environment and natural resources, and, where appropriate, encourage long-term economic growth to the point of maximum sustainable yields. The project's sea turtle component supports biological diversity objectives by training and education and public awareness programs, to be responsive to the touristic attraction of sea turtles while preserving their natural habitats and protecting their life cycles. This component also responds to Section 119.68 of the Foreign Assistance Act on Endangered Species. Participant Training (AID Handbook 10, June 1988) - The FDMP's training component will improve the technical, managerial and policy leadership of private and public sector fisheries institutions and fill identified gaps between Omani competencies and required levels of knowledge, skills and attitudes.

III. PROJECT DESCRIPTION

A. Perceived Problems

1. Lack of Trained Manpower

A primary constraint to economic development in Oman is the lack of trained manpower. In the fisheries sector, this constraint results in a shortage of qualified public officials to meet the growing demands of the sector, difficulty for Omani businessmen to compete with foreign firms for the lucrative international seafood market, lower productivity of traditional fishermen because of limited exposure to more advanced fishing methods, and a lack of understanding on the part of some government officials and private citizens of the need for better management and conservation of Oman's marine resources. The FDMP will address these constraints by providing technical assistance to plan and program training, vocational and technical training, study tours, on-the-job training, diploma and graduate-level training, support for in-country fisheries training efforts, and visiting experts and professors.

2. Operational Needs of the Public Sector

A corollary to trained manpower shortages is the need for competent professionals to fill key positions until such time as qualified Omanis are available to assume responsibility. At present, there are active programs within the Ministry in marine research and stock assessment, collection and analysis of fisheries statistics, extension services to traditional fishermen and marketing of Omani fish products domestically and abroad. Most of these programs were established and staffed with foreign advisors under the Fisheries Development Project. Discontinuation of any of these programs would result in a major setback for the fisheries sector development objectives outlined in Part II.A. As a follow-on project, the FDMP will continue, and in some cases expand, the technical assistance to these programs. Although part of their duties will be to work with

Omani counterparts, when available, the primary role of the advisors will be the day-to-day operations of these programs. As the project nears completion, qualified Omanis will be completing their training/education programs and begin working with the advisors in a more traditional counterpart relationship.

3. Constraints to Private Sector Participation

Official Government policy is to encourage and support private sector participation in fisheries. A recent study financed by AID's Bureau for Private Enterprise pointed out that Oman's business climate, including credit availability and tax incentives, is generally conducive to private sector investment. However, the same study pointed out that a number of constraints brought about by ill-defined policies and procedures within the Ministry have created obstacles to private sector participation in the sector. A major problem is the difficulty potential investors encounter in obtaining information on investment opportunities or in obtaining licenses for experimental fishing, and the Ministry is reluctant to ease restrictions until better scientific data is available on the extent of fish stocks. Except for concessions granted to foreign trawl fleets, the Ministry forbids the hiring of foreign labor for commercial fishing. A lack of harbors and other landing facilities are also a deterrent to the expansion of commercial fishing.

The FDMP will address these constraints to private sector participation by continuing to conduct research and assessments of fish stocks for use by the Ministry in issuing licenses for experimental and commercial fishing, by financing feasibility studies in areas of interest to potential investors, by providing practical training to private sector participants, through such vehicles as the International Executive Services Corps and Entrepreneurs International, and by engaging the Ministry in policy discussions to find more ways to actively engage the private sector in fisheries development.

4. Threat to Sea Turtles

Also within the purview of the Ministry is the protection and management of a marine resource currently on the endangered list of international conservation organizations---the Olive Ridley, Hawksbill, Loggerhead and Green sea turtles which feed and nest along the coast of Oman. Much of Oman's 1,700 kilometers of coastline forms relatively undisturbed feeding grounds and/or nesting beaches for these turtles, which have been severely compromised or eliminated in many parts of the world because of human encroachment and degradation of their natural habitat. Similar threats to these turtles are beginning to appear in Oman, as coastal inhabitants build along nesting beaches and tourists threaten the nesting patterns with inappropriate behavior. In order to preserve the natural environment of these turtles, the FDMP will provide technical assistance and training to design and conduct research programs and to develop and implement a national sea turtle management

plan. The project will provide technical assistance and training to establish this plan and to undertake urgent follow-on recommendations.

5. Lack of Adequate Harbors and Other Fish Landing Facilities

Although Oman's fisheries can probably safely yield much larger quantities of fish, recent studies indicate that infrastructure projects, along with fleet modernization, are necessary to realize their commercial potential. OAJC-sponsored studies have indicated that the total construction cost of harbors and additional landing facilities is estimated at \$135 million. Their development would meet one of the basic requirements for greater private sector participation. The FDMP will finance the development of a national plan for fisheries harbor development, along with detailed social, economic and engineering feasibility studies for some of those facilities deemed to be of the highest priority for the fisheries industry.

B. Project Goal and Purpose

1. Goals

The project's goals are to: 1) increase Oman's non-oil revenues; 2) promote the socio-economic welfare of Oman's fishermen; and 3) conserve and protect Oman's marine resources.

As a source of non-oil exports, fish and fish products increased from 17% in 1978 to over 36% of GDP in 1986, and the volume of fish exports increased by sevenfold during the same period. On the other hand, more dramatic export gains might have been realized with better marketing techniques and a guaranteed supply of high quality product. Preliminary research findings also indicate that the maximum sustainable yield of some important fisheries, such as sardines and other small pelagics and demersals (bottom fish) may be two or three times their current catch. Better scientific data on actual fish stocks, improved fishing methods taught in extension programs, and better handling and marketing of products will contribute toward achievement of the first goal.

It is estimated that over 10,000 Omani heads of household rely to some extent on traditional fishing methods for their livelihood. During the past several years, over 2,500 of them have been exposed to improved fishing techniques and gear and sea safety demonstrations under the Fisheries Development Project. With an increase in catch and better marketing opportunities, the social and economic benefits to these traditional families have become available in the form of higher incomes, greater productivity and better safety records. The FDMP will continue and expand the extension services made available to Omani fishermen.

As people become increasingly aware of their economic potential, Oman's marine resources face a possibility of over

exploitation, degradation or loss. A guiding principle in fisheries research and stock assessment programs has been to determine the "maximum sustainable yield" of a resource. The FDMP will contribute to the third goal by continuing the research programs at the Marine Science and Fisheries Center, to assist the Ministry in determining the numbers and types of commercial fishing licenses to issue and in setting policies which conserve, as well as manage, Oman's fisheries resources.

At the same time, the FMDP will develop a turtle research and management program which allows touristic enjoyment of sea turtles without degrading their habitat or disrupting their life cycles.

2. Purposes

The purposes of the project will be to: 1) provide an institutional capability within the Ministry and the private sector over the long term to manage, utilize and conserve their marine resources and 2) provide operational staff assistance to the Ministry over the medium term.

Through project-related staff development, a major focus of the project will be to meet education and training requirements of the fisheries public and private sectors. It is planned that, by the end of the project, the role of expatriate advisors will be one of advising and overseeing Omani counterparts who have returned from training. By the third phase, i.e., in the anticipated project following the FDMP, the primary focus will be on institutional support, with the roles of technical assistance refocused to advisory positions.

Important programs now exist in research and stock assessment, statistics, extension services and marketing. For the most part, these programs are managed by expatriate technical advisors, because there are not enough trained and qualified Omanis to assume responsibility. Many of these professional positions require advanced academic qualifications and/or years of experience. As the second phase in a three phase scheme, the FMDP will finance expatriate advisors with an operational role, while their future Omani counterparts are receiving appropriate education and training.

The project will provide approximately 124 years of technical assistance to staff and coordinate important programs in research and stock assessment, statistics, extension services and marketing. A wide variety of training will be provided in these same fields to approximately 260 Omanis. Attached hereto as Annex A is a table of proposed advisory inputs and estimated levels of effort. Annex B Preliminary Technical and Academic Training Needs Assessment has been based on training reports and recommendations developed under the Fisheries Development Project. Specific project inputs and outputs will be developed in the project paper through technical studies undertaken in the design phase and will provide funding details for training

participants, salaries and allowances for project advisors and supporting equipment needs of the advisors. A preliminary logical framework (see Annex D) is included to show how project inputs and outputs contribute to the purposes and goals.

C. Expected Achievements and Accomplishments

As a result of the above inputs, the project can expect to accomplish the following:

- a comprehensive training plan for the sector;
- 1,000 person-months of short-term training for over 200 Omanis;
- approximately 24 graduate degrees in fisheries academic fields;
- selected research activities and completed stock assessments for fisheries of major importance;
- a national management plan and selected research activities for sea turtles;
- quarterly and annual reports of fisheries statistics;
- an operational public aquarium and marine sciences library managed by Omanis;
- the use of improved gear and fishing and handling methods by Omani fishermen;
- an established marketing strategy and network for domestic and export distribution of seafood products;
- completed feasibility studies for private sector utilization in fisheries investment schemes;
- a national fisheries harbor development strategy.

D. Outline of the Project and How it will Work

The project will consist of two main components: technical assistance and training. These two elements will be provided under one or two host country contracts. Potential proposers will be encouraged to submit proposals on the entire technical assistance training package, but will have the option of submitting proposals on any combination of the following requirements: technical assistance to the DGF, technical assistance for the research program, training-related technical assistance for the training component.

1. Technical Assistance

Technical advisors will be assigned to high priority programs within the Ministry. As most of these programs have been previously defined under the Fisheries Development Project, the project advisors will mostly fill existing positions and work with counterparts and support staff already assigned to those programs. Up to two advisors will be responsible for liaison with and assistance to the private sector. Two training specialists will initially be assigned to develop a comprehensive training plan and begin implementing training programs. The technical advisors will report to a chief of party, who will be the direct counterpart of the Director General of Fisheries. It is expected

that this chief of party will also have regular access to the Minister and Undersecretary on matters which require their attention. Annex A is a preliminary estimate of the level of effort, subject areas and schedule of advisory requirements over the life of the project. Many of the U.S. positions in Annex A show a reduction in person-years toward the end of the project. This indicates that advisory roles will be less operational in the later years of the project as qualified Omanis complete their training programs and return to their employers. By the end of the project, long-term advisory services will be reduced by approximately 40 percent in preparation for the purely "advisory" role to be filled under the third phase project.

The implementing contractor(s) will be required to draw up a life-of-contract implementation plan, which will focus on the objectives of the project and be used as a reporting and monitoring reference. This plan will include specific advisory work plans and training objectives within each field. Advisory reports and recommendations will be presented to the Ministry for follow up action. The implementation plan, the training plan and the work plans will be subject to periodic (at least annual) review and revision. These periodic reviews will supply data for the next year's budget planning process.

2. Training

The training component of the project will be carried out under or in conjunction with the technical assistance contract. Technical and academic programs will be implemented in accordance with the policies and procedures outlined in AID Handbook 10. The Joint Commission will pay the ordinary and necessary expenses incurred by participants, including training fees and tuition, programming, student maintenance and allowances authorized by AID Handbook 10. The Ministry will pay the recurrent salary and international travel costs of employees in training under the project and project support costs including project offices, supplies, telephone and office equipment. During the first months of the project, a comprehensive training plan will be developed, based on a sectorwide manpower assessment conducted during the project paper stage. This training plan will address the manpower development requirements of the Ministry, the Bank of Agriculture and Fisheries, and faculty and staff for Sultan Qaboos University (see Annex E for a description of the university and its Fisheries Department). The training plan will also accommodate some of the needs of private sector participants, on a need basis or in a facilitating role. Annex C is an illustrative schedule by project year of different categories of training. The availability of qualified participants with academic degrees by the midpoint of the project complements the gradual reduction in U.S. advisory services for the same time period presented in Annex A.

3. Project Financing and Accounting

Project financing will include up to \$40.0 million in U.S.

grant funds over the life of project, to be committed in increments within a schedule to be developed in the project paper. Foreign exchange costs will include salaries, transportation and other allowances for the resident advisors and short-term consultants, suitable vehicles and furnished housing for the technical advisors, some support services such as accounting, secretarial, translation and administrative services, office supplies, an equipment and supplies category for necessary scientific, extension and field items, as well as the applicable training-related costs authorized by Handbook 10. The Government of Oman's contribution will include salaries, allowances and project support vehicles and equipment for counterpart and support staff, and office space and furnishings within the Ministry for the advisors.

Project accounting and accountability will be handled independently of Ministry administrative and accounting procedures. Project budgets and their expenditures will be prepared and monitored by the Omani Program Coordinator, in consultation with the contractor(s). Quarterly expenditure reports will be presented to the OAJC and the Ministry by the Contractor(s). An Administrative Assistant/Accountant will be hired locally under the technical assistance contract to oversee the day-to-day administrative and accounting requirements of the project. The project paper will discuss the periodic audit requirements of the project.

4. Monitoring and Evaluation

Project monitoring will be the responsibility of the OAJC project officer and the Ministry program coordinator assigned to the project. Regular reporting will be required under the advisory and training contract(s), with reports submitted to the OAJC and the Ministry.

In conjunction with input from ANE/DP/E on alternate sources of quantitative data, a project monitoring and evaluation system will be devised to: review and analyze data and indicators about project inputs and outputs; to measure the project's micro and macro impacts in the sector; and to measure progress toward achieving project purposes. It is anticipated that sources of data will include community focus groups and informal questionnaires at the fisherman and fishing village level and direct sampling and key informants for data on fish catch, handling and processing. The OAJC will conduct annual internal project reviews.

External evaluations will be conducted in project years 3, 6, and 8. These will be conducted such that major decisions can be incorporated in the annual review of the contractor(s)' implementation and training plans, and they will provide sector impact analyses for Action Plans. Each evaluation will include an in-depth review of improved institutional capacity in the fisheries sector. The evaluation in project year 6 will also provide information for the Phase III project design. A final

post project impact evaluation will be conducted in project year 8.

IV. FACTORS AFFECTING PROJECT SELECTION AND FURTHER DEVELOPMENT

A. Social Considerations

Before the 1970's, Oman's economy was almost entirely based on subsistence farming and fishing. As the discovery and exploitation of oil resources have changed the economy, the role of fisheries has been greatly diminished. In an effort to reduce the flow of people to urban centers and to preserve traditional sources of livelihood, the Government has developed policies which encourage a measured development of the fisheries sector. This has been evidenced by the establishment of the Fishermen's Encouragement Fund, a subsidy program to provide small boats and engines for individual fishermen, the construction of ice plants and cold stores to facilitate the handling and processing of catch as it is landed, and licensing restrictions on commercial fishing intended to conserve individual fisheries until their full potential can be assessed. Despite these measures in favor of fishing as an occupation, the number of fishermen continues to decline as young people seek less demanding and higher paying employment.

As most of the programs to be undertaken under the FDMP will be extensions or modifications of programs under its predecessor project, a demonstrated interest and willingness to participate already exists on the part of many of the potential beneficiaries. The Fisheries Development Project has demonstrated successes in formulation of a data base to measure economic variables (numbers of fishermen, size and content of catch, prices per kilo, numbers of boats and engines, level of effort, etc.), in extension services to Omani fishermen (over 2,500 have benefitted to date), in establishing a marketing program to expand domestic and foreign markets for Omani seafood products, and in conducting research on priority fisheries, with resultant policy recommendations. Fifteen Ministry officials have participated in six short-term training programs in the U.S., while 12 students were accepted into fisheries undergraduate and graduate degree programs in U.S. universities. Under the FDMP, many of the technical advisors, and particularly the extension specialists, will be expected to speak Arabic. This should encourage participation by those fishermen who also may have confronted a language barrier in the past.

Project beneficiaries will include 1) Oman's estimated 10,000 fishermen, located in sometimes remote fishing villages along Oman's 1,700 kilometer-long coastline, 2) private entrepreneurs involved in the handling and marketing of seafood products, who receive training, increased productivity of the fishermen who are their suppliers, and through information provided by feasibility studies funded under the project; 3) Ministry officials, largely concentrated in the capital and Salalah, who receive training in various aspects of fisheries research, development or management;

and 4) consumers of seafood products throughout Oman and abroad who enjoy a better quality and wider selection of products because of their improved handling and a more efficient marketing network.

Ministry officials are in frequent contact with potential beneficiaries, who are provided services under various Ministry departments (e.g., there is a director of technical services and extension to assist traditional fishermen, a director of fisheries resources development for marketing and consumer education and a director of the Marine Sciences and Fisheries Center for research and stock assessment). These directors will assure that the concerns of their constituents are addressed in the project design. Opportunities for feedback from project participants will be available during project implementation and evaluation, e.g., acceptance rates of new fishing techniques by traditional fishermen will be observed, training participants will be monitored in their progress and, along with their supervisors, will be required to complete training impact reports, and the ongoing statistics program will provide data on the socio-economic status of Omani fishermen.

B. Economic Considerations

With a declaration of national sovereignty over a 200 nautical mile exclusive economic zone in 1981, Oman laid claim to a tremendous increase in marine resources, the exploitation of which would contribute to several fisheries economic objectives: diversification of the national economy; upgrading the standard of living of traditional fishermen; creation of new investment opportunities in fisheries; and an increase in GNP through seafood exports.

In order to realize the economic potential of these fisheries resources, Oman must create a cadre of qualified and dedicated civil servants and businessmen who can cooperate in the formulation and implementation of policies and regulations that will allow the exploitation of these marine resources at their maximum sustainable yields. In most countries the rational management of the fisheries sector has taken decades to develop. This project will try to accelerate this process for Oman by a concentrated effort on training and in continuing the operation of high priority programs.

As an institutional support and training project, the FDMP does not lend itself to the same economic analyses that an infrastructure or fisheries production project would do. It is difficult to quantify the economic impact of successful training programs on future revenues generated in the sector. Returns on training will likely be medium- and long-term, as it takes time to recruit, train and place qualified individuals. Insofar as their recommendations are implementable and carried out by the Ministry, the technical advisors will generate more immediate returns on their investment. One project output, the establishment of a national sea turtle research and management

plan, cannot be measured directly in economic terms, although the impact on potential tourism will have a positive effect.

Analysis to date indicates that, with the right mix of scientific information, government policies and enforcement of regulations, training and technical assistance will have a major impact on the contribution of the fisheries sector to Oman's economy. The statistics program has collected and analyzed data which show a higher overall volume of catch by traditional fishermen and an increase in the value of their catch over the past three years. Preliminary stock assessments and research indicate that some fisheries (e.g., lobsters, kingfish) may be near the point of maximum sustainable yield, whereas others (e.g., sardines) are being fished at 30 to 40 percent of their potential. Assuming stable prices, the combination of improved fishing techniques, efficient handling and processing, aggressive marketing and more data on fish stocks to determine sustainable yields, the result will be greater economic returns, even without any major governmental interventions.

C. Relevant Experience with Similar Projects

In most respects, this project follows closely the progress, and second interim evaluation recommendations, of the OAJC's Fisheries Development Project. Under that project, technical assistance has been provided under two host country contracts to the Ministry of Agriculture and Fisheries, with RDA International, Inc. providing advisors to several activities within the Ministry's DGF and Oregon State University supplying most of the scientific staff for the Ministry's Marine Science and Fisheries Center. Short-term training and eleven academic degree programs in fisheries were financed under the OAJC's Scholarship and Training Project.

The roles of the technical advisors under the predecessor project were a combination of institution building and operational support for programs in statistics, extension services, marketing and research, which were all begun under the project and are ongoing. Problems have emerged because of the lack of Ministry counterpart and support staff and unanticipated budgetary constraints (due to the decline in oil revenues in the mid 1980s) which have limited the institutional building achievements of the project. Following the recommendations of the 1987 fisheries evaluation, the FDMP will focus on the operational support role of the technical advisors and emphasize pre-institution building through an intensive training effort. At the same time, the project (through advisory recommendations and ensuing discussions) will seek to address the policy issues which have surfaced during the predecessor project, including the need for more Government support for infrastructure, the introduction of foreign workers to staff Omani commercial fishing vessels and the need for establishing more effective enforcement procedures of existing regulations.

D. Cooperating Omani Agency

The Ministry of Agriculture and Fisheries will be the primary Government of Oman agency that participates in the design and implementation of the project. In particular, the Fisheries Development Project Program Coordinator (currently Director of Statistics and Data Processing within the Ministry) and the Director of the Marine Science and Fisheries Center are expected to play major roles in project design and implementation. The Chamber of Commerce and Industry will be a member of the interagency committee involved with project design and monitoring. The Ministry of Commerce and Industry will cooperate regarding the touristic elements of the national sea turtle management plan.

E. AID Support Requirements Capability

Monitoring of project implementation will be the primary responsibility of one project officer of the OAJC, with support as required from an OAJC assistant project officer and the OAJC financial/administrative office. Backstopping from AID/Washington will be required from ANE/PD, ANE/MENA, ANE/TR, S&T/AGR and OIT. These staff requirements are already in place and performing similar functions under the Fisheries Development Project. Project support services similar to those required under the project are also already being provided to the contractors under the Fisheries Development and Scholarship and Training Projects.

F. Estimated Costs and Methods of Funding

AID funds will be committed to the FDMP in accordance with established procedures under the OAJC "umbrella grant project." The FDMP will be funded incrementally, with implementation progress and periodic reviews dictating the amount and timing of each increment.

Costs were estimated based on historical costs under the Fisheries Development and Scholarship and Training Projects, with a built-in annual inflation factor of ten percent. Cost estimates will be refined at the project paper stage.

The Government of Oman contribution will primarily consist of salaries and allowances for counterpart and support staff and training participants, as well as office space for the advisors. These costs will be met out of the Government's development and recurrent cost budgets allocated to the Ministry of Agriculture and Fisheries.

The following table summarizes the estimated budget for the project.

Estimated Budget (\$000)

Line Item	AID	GovOman	TOTAL
U.S. Field Staff (125 years)	25,000	1,500	26,500
U.S. Home Office (24 per-mo)	2,600	0	2,600
Local Field Staff (32 years)	750	0	750
Training/Education	6,000	5,000	11,000
Equipment/Vehicles/Supplies	1,750	1,000	2,750
Consultants	750	0	750
Feasibility Studies	1,000	0	1,000
Counterpart Staff	0	8,000	8,000
Audit and Evaluations	500	0	500
Contingencies	1,650	0	1,650
TOTALS	40,000	15,500	55,500

G. Design Strategy

Project design will be a collaborative effort primarily between the OAJC and the Ministry, with some input from the Chamber of Commerce and Industry and the Ministry of Commerce and Industry, Directorate of Tourism. The OAJC project officer and the Ministry program coordinator (already appointed under the Fisheries Development Project) will play lead roles. Project design will be based, to a large degree, on recommendations for further assistance and training contained in the November 1987 second interim evaluation report of the Fisheries Development Project. This report recommended a long-term commitment on the part of the OAJC to fisheries development, given the level of effort expended in the sector to date, the need to build on that foundation, the Government's interest in continued assistance to fisheries and the contribution that the United States, based on its own advanced marine management and conservation programs, can bring to the development of Oman's fisheries. Following one of the evaluation's recommendations immediately, the OAJC arranged for a consultant to review the opportunities and constraints for private sector participation in Oman's fisheries. Some of the consultant's recommendations will be addressed in the project, including the need to engage the Government in policy dialogue, training requirements, and the conducting of feasibility studies for promising fishery projects.

As a follow-on project to the Fisheries Development Project, this project will not face many of the design obstacles of a new project in a new sector. There already exists a good working relationship between the OAJC and counterparts within the Government, and both parties are familiar with the issues which need to be addressed. A project committee comprising officials of the OAJC and the Ministry, with participation of other Government officials, as requested, will oversee the design of the project. Much of the analytical work can be done by OAJC and Ministry officials. It is anticipated that the OAJC will call on AID/Washington personnel (such as the fisheries expertise

available in S&T/AGR) or other U.S. technical expertise (e.g., the University of Rhode Island under a Blanket Order Agreement) to assist in the final writing and/or review of the technical aspects of the project. A manpower assessment, a technical review by U.S. fisheries authorities, studies on Women in Development and evaluation indicators, a review of the sea turtle research and management requirements, and a local study of accounting and administrative procedures will all be scheduled in time to contribute to the relevant sections of the project paper.

Upon review and approval of the PID by AID/Washington, the OAJC recommends approval to proceed with the project paper. The OAJC has access to the necessary field staff to address the economic, engineering, legal, and financial analytical requirements of project design, and can draw on technical expertise available in AID/Washington or through established contracting mechanisms. Therefore, in accordance with Delegation of Authority No. 400, effective February 10, 1986, the AA/ANE is requested to redelegate authority to approve the project paper and to authorize the FDMP to the A.I.D. Representative to Oman. The project paper is scheduled to be completed by December 1988. Pre-contracting for the project will begin by January 1989, with a technical assistance team to be in-country by June 1989.

H. Recommended Environmental Threshold Decision

In compliance with 22 CFR 216, "A.I.D. Environmental Procedures," there are no reasonably foreseeable negative impacts on the physical or human environment caused by the implementation of this institutional development project. It is requested that the ANE Environmental Officer review this PID, with emphasis on the project's sea turtle and fisheries research components, and, if in concurrence, issue a "Negative Determination" for this project.

I. Project Policy Issues

1. Private Sector: Despite the Government's professed policy of encouraging private sector development of fisheries, in fact a number of constraints need to be addressed under the project to encourage greater private sector participation, including -

* **Lack of Information.** The Government bureaucracy is slow to respond to requests for specific information or permits for experimental fishing by private companies. Many firms do not have the capital to undertake feasibility studies of promising fishery activities which could lead to investment opportunities.

* **Use of foreign crews for commercial fishing.** Present policy states that non-Omanis may not participate in the traditional fishery sector. This policy, combined with the incentives under the boat/engine subsidy program, has largely eliminated the dhow (a vessel employing several crew members) commercial business and means that there are practically no commercial fishing ventures (except for individual fishermen)

smaller than the foreign trawlers, despite an increasing demand for more seafood products.

* **Government-sponsored fishing company.** A Government decision announced almost one year ago plans to create a large quasi-Government fishing company with exclusive rights to develop offshore commercial fishing. No further action has been specified by the Government, effectively curbing the investment plans of the existing private sector firms involved in fish processing and export pending the final determination on this company.

* **Lack of clear-cut long-term Government policies related to the private sector development of fisheries.** Only recently has the Government begun to be aware of its role in the management and development of fisheries. As a result, it is slow and often unresponsive in dealing with requests for information, licenses for experimental fishing, enforcement of existing regulations, etc.

Under the project, these and other private sector issues will be dealt with through policy discussions with the Government and the Chamber of Commerce and Industry and by financing feasibility studies of promising fishery activities to promote private sector investment. One of the advisory positions will include responsibility for public and private sector liaison.

2. Institution Building: Under the predecessor project, institution building objectives met with limited results. This was due to a slow start in implementing training programs, a general paucity of competent officials to serve as counterparts to the advisors, and unanticipated budgetary constraints which caused a hiring freeze for new positions. The new project will stress the operational, instead of the advisory, role of the technical assistance, and will primarily focus institution building efforts on the sector-wide training program, which will show results in the medium- and long-term.

3. Status of OAJC Beyond 1990: Although the current Agreement establishing the OAJC is due to expire in 1990, preliminary discussions have already begun on renewing the OAJC for another term. As discussed during Oman's Program Week in AID/Washington in June 1988, all project documentation will contain language that states that "future commitments of funds under this project are subject to the renewal of the bilateral agreement which established the Omani-American Joint Commission, as executed by representatives of the governments of the Sultanate of Oman and the United States of America on August 19, 1980, and to the availability of funds."

4. Biological Diversity: This project is, to a large degree, a biological diversity project. A discrete component within this sphere is the sea turtles research and management plan. Also important contributors to biological diversity will be the research programs designed and implemented for Oman's other

priority fisheries. The existence of better scientific data will help ensure that the utilization of Oman's marine resources is rational and sustainable, thereby ensuring biological diversity. Both the technical advisory services and the training component will contribute to this end.

5. **Women in Development:** With assistance from AID/W, the OAJC will prepare a report by December, 1988, which addresses WID concerns in Oman, including those of the fisheries sector. This strategy was agreed during Oman Program Week in June, 1988.

6. **Policy Dialogue:** Because of its small staff and position as an Omani Government entity, the OAJC does not engage the Government in policy dialogue on a cross-sectoral macro basis. Policy discussions under the FDMP will focus on fisheries issues generally identified and addressed by the technical advisors, with support from the OAJC.

7. **Transfer of Technology:** The FDMP is in every sense a "technology transfer" subject; by providing technical assistance and training, U.S. advisors and instructors will be imparting a long accumulated background and knowledge of fisheries over a relatively short time span.

Attachments:

- Annex A Professional Services in the Field
- Annex B Preliminary Technical and Academic Training Needs Summary
- Annex C Illustrative Training Implementation Grid
- Annex D Preliminary Logical Framework
- Annex E Sultan Qaboos University

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PROFESSIONAL SERVICES IN THE FIELD

PROGRAM	89/90		90/91		91/92		92/93		93/94		94/95		95/96		96/97		Total	
	U.S.	Oman																
Statistics	2	-	2	-	2	-	1	1	1	1	1	2	1	2	1	2	11	8
Extension	3	-	3	-	3	1	2	1	2	2	2	2	1	2	1	2	17	10
Private Sector	2	-	2	-	2	-	1	-	1	-	1	-	1	1	1	1	11	2
Region	2	-	3	-	3	-	3	-	2	1	2	1	2	2	2	2	19	6
Research	6	-	6	-	6	-	5	1	5	1	5	1	4	2	4	2	41	7
Training	2	-	2	-	2	-	2	-	1	1	1	1	-	1	-	1	10	4
Ref of Party	1	-	1	-	1	-	1	-	1	-	1	-	1	-	1	-	8	-
Ext. COP	<u>1</u>	-	<u>8</u>	-														
Sub. Totals	19	-	20	-	20	1	16	3	14	6	14	7	11	10	11	10	125	37

In/Acct	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	
Translator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	8	
Secretary	<u>2</u>	<u>16</u>																
Final Hire Totals	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	32	

PRELIMINARY TECHNICAL AND ACADEMIC TRAINING NEEDS SUMMARY

1. Technical Training:		208 (e)
	Short course, study tours, 2-year certificate training	
2. Bachelors Degree		
	MSFC	31 (a)
	DGF	28 (b)
3. Masters Degree		
	MSFC	24 (a)
	DGF	5 (c)
	SQU	6 (d)
4. Ph.D.		
	MSFC	10 (a)
	DGF	1 (c)
	SQU	6 (d)

Sources

- a. "Updated Degree Program Training Needs for Center Staff by the Year 2000," prepared by R. G. Dudley, Oregon State University Chief of Party and Chief Research Scientist, Marine Science and Fisheries Center, Oman, 14 March 1988.
- b. "Training Requirements to Year 2000, Directorate General of Fisheries," prepared by RDA International.
- c. "Directorate General of Fisheries, Oman Institutional, Manpower and Training Requirements," Williams, McCreight, and Sainsbury, June 1984.
- d. Estimates of SQU faculty provided by Dr. Steven Head, College of Science, Sultan Qaboos University and Dr. Jackson Davis, College of Agriculture, Sultan Qaboos University.
- e. "Fisheries Sector Training Plan," Scholarship and Training Project, November 1987.

ILLUSTRATIVE TRAINING IMPLEMENTATION GRID

	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>92/93</u>	<u>93/94</u>	<u>94/95</u>	<u>95/96</u>	<u>96/97</u>
<u>MASTERS DEGREE</u>								
Group 1 Start 90/91 (4)		x	x	x				
Group 2 Start 91/92 (4)			x	x	x			
Group 3 Start 92/93 (6)				x	x	x		
Group 4 Start 93/94 (6)					x	x	x	
<u>Ph.D DEGREE</u>								
Group 1 Start 91/92 (2)			x	x	x	x		
Group 2 Start 93/94 (2)					x	x	x	
<u>TECHNICAL TRAINING</u>	x	x	x	x	x	x	x	x

PRELIMINARY LOGICAL FRAMEWORK

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>PROGRAM OR SECTOR GOAL</u></p> <ol style="list-style-type: none"> To increase Oman's non-oil revenues. To promote the socio-economic welfare of Oman's fishermen. To conserve and protect Oman's marine resources. 	<p><u>MEASURE OF GOAL ACHIEVEMENT</u></p> <ol style="list-style-type: none"> Increased share of fisheries among non-oil revenue sources of GNP. Increased income to fishermen. Sustained levels of fisheries stocks that are commercially exploited; reduction in human induced mortality of sea turtles. 	<ol style="list-style-type: none"> Government records, national accounts. DGF census results; DGF statistics on catch and income; OBAF development loans. Fisheries stock assessments; sea turtle data. 	<p><u>FOR ACHIEVING GOAL TARGETS</u></p> <ol style="list-style-type: none"> Government development policies encourage the private (fisheries) sector; stocks not over fished; favorable return on Omani fish products. Fishermen willing to adopt technological changes; favorable return on fish products. Government adopts and enforces recommended conservation policies.
<p><u>PROJECT PURPOSE:</u></p> <ol style="list-style-type: none"> To provide an institutional capability within the Ministry and the private sector over the long-term to manage, utilize and conserve their marine resources; and To provide operational staff assistance to the Ministry over the medium term. 	<p><u>END OF PROJECT STATUS</u></p> <ol style="list-style-type: none"> Expatriate advisory positions become less "operational" and more "advisory," up to 50% of advisory positions are assumed by trained Omanis; private firms undertake investments based on feasibility studies recommendations; ongoing programs established for fisheries and turtles. Functioning programs in statistics, extension, marketing and research. 	<p>Project Evaluations.</p>	<p><u>FOR ACHIEVING PURPOSE TARGET</u></p> <ol style="list-style-type: none"> Government of Oman, particularly Ministry of Agriculture and Fisheries, to institute policy changes which encourage private sector participation; Ministry willing to hire and support staff for training; other sector beneficiaries willing to provide staff for training. Willing to provide counterpart and support staff with technical and logistical support for various programs.

OUTPUTS	MAGNITUDE OF OUTPUTS		FOR ACHIEVING OUTPUTS												
<ol style="list-style-type: none"> 1. Comprehensive, sector-wide training plan; 2. Sector-wide short-term training; 3. Fisheries graduate degrees; 4. Completed research activities and stock assessments for major fisheries; 5. Completed research activities and national sea turtle management plan; 6. Feasibility studies for private sector investment or utilization; 7. Marketing strategy for Omani seafood products; 8. Operational Marine Science Center aquarium and library; 9. Operational extension services program. 	<ol style="list-style-type: none"> 1. Training plan covering needs of DGF, OBAF and SQU faculty/staff. 2. Over 200 Omanis participate in 1,000 person-months of short-term training. 3. 25 degrees (21 M.Sc.s. and 4 Ph.D.s) among participating agencies. 4. Research activities completed for all priority fisheries and turtles, including tuna, kingfish, lobster, trawl, shrimp, abalone, etc. 5. Sea turtle management plan in place. 6. 10 feasibility studies undertaken at private sector request. 7. Ongoing marketing programs to importers of seafood products, including U.S., Europe, Asia and Australia. 8. MSFC library & aquarium operational 9. Extension program ongoing with 8,000 fishermen trained by a staff of 2 management personnel and 10 field agents. 	<p>Project evaluations and monitoring; DGF and MSFC records.</p>	<ol style="list-style-type: none"> 1. Sufficient numbers of Omanis can be identified for training by establishment of incentives to attract Omanis to fisheries. 2. Training programs can be identified and implemented for qualified candidates. 												
INPUTS	IMPLEMENTATION TARGET (TYPE/QUANTITY)		FOR PROVIDING INPUTS												
<ol style="list-style-type: none"> 1. Short-term, non-academic training. 2. Long-term, academic training; 3. U.S. advisory services; 4. Vehicles and equipment; 5. Administrative support; 6. Local inputs, in-kind and financial. 	<table border="0" style="width: 100%;"> <tr> <td></td> <td style="text-align: right;">(\$000)</td> </tr> <tr> <td>1. Training</td> <td style="text-align: right;">11,000</td> </tr> <tr> <td>2. TA</td> <td style="text-align: right;">29,100</td> </tr> <tr> <td>3. Equipment</td> <td style="text-align: right;">2,750</td> </tr> <tr> <td>4. Counterpart Staff</td> <td style="text-align: right;">8,000</td> </tr> <tr> <td>5. Other</td> <td style="text-align: right;">2,150</td> </tr> </table>		(\$000)	1. Training	11,000	2. TA	29,100	3. Equipment	2,750	4. Counterpart Staff	8,000	5. Other	2,150	<p>Joint Commission project documentation and Ministry and DGF financial records.</p>	<ol style="list-style-type: none"> 1. Required funding will be made available on a timely basis. 2. The Ministry and other Omani agencies can identify or recruit staff for training. 3. Appropriate administrative and accounting procedures can be established for the project and within the Ministry.
	(\$000)														
1. Training	11,000														
2. TA	29,100														
3. Equipment	2,750														
4. Counterpart Staff	8,000														
5. Other	2,150														

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SULTAN QABOOS UNIVERSITY

Sultan Qaboos University was opened by His Majesty Sultan Qaboos bin Said in September 1986. With the opening of the university, Oman achieved its aim of providing free education through the tertiary level. Located in al-Khoudh about 50 kilometers from Muscat, the campus houses six colleges, student and faculty housing and facilities, a teaching hospital, a teaching farm and physical plant.

The six colleges - Engineering, Agriculture, Science, Education and Islamic Studies, Arts, and Medicine - emphasize Oman's policy of preparing Omanis to fill positions in priority development fields. The College of Engineering offers a five-year degree program in civil, mechanical, electrical, mining or petroleum engineering, and electronics. The College of Agriculture has a four-year program in three streams: plant, animal or fisheries science and management. The Science College's five year program will graduate students in physics, chemistry, biology (marine and terrestrial) or mathematics. The College of Education and Islamic Studies qualifies its graduates to teach history, geography, Islamic studies, Arabic, and English in secondary schools or to take up appointments in mosques, Islamic courts or other appropriate institutions. The Arts College offers programs in languages and literature.

The Medical College provides a four-year degree course in medical science and an additional three-year program in clinical medicine for the Bachelor of Medicine or Bachelor of Science degree, followed by one-year's internship at the University's teaching hospital.

To qualify for entry, students must have completed 12 years of schooling. Upon qualification they must take and pass a one-year basic "foundation" course in science, English and other classes geared to their course of study. English is the language of instruction in most of the colleges.

Enrollment is currently around 1,500 students, approximately half of which are female. The institution is intended to accommodate up to 2,500 students in an academic year.

Fisheries courses are offered in the College of Agriculture and the College of Science. In the College of Agriculture studies are streamed into two curricula: (1) Fisheries Technology, which includes courses in mechanics, fishing operations, gear technology, vessel and processing technology, ports and markets, and computer applications; and (2) Fisheries

Science, which includes courses in ecology, stock assessment, ichthyology, population dynamics, coastal management, and fisheries oceanography.

The College of Science offers a fifth year specialization in its Department of Biology; marine ecology, which includes courses in biological data handling, oceanography, marine production, inshore ecology and coastal management, as well a participation in a substantial research project.