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PROGRAMME PLANNING

COUNTRY AND INTERCOUNTRY PROGRAMMES AND PROJECTS

CONSIDERATION AND APPROVAL OF GLOBAL AND INTERREGIONAL PROGRAMMES AND PROJECTS

Project recommendation of the Administrator

Supplementary assistance for a global project

Survey and Identification of World Marine Fish Resources
(GLO/82/001)

Estimated UNDP contribution: \$428 000

Duration: One year

Executing Agency: Food and Agriculture Organization
of the United Nations (FAO)

I. BACKGROUND

1. The global project Survey and Identification of World Marine Fish Resources (GLO/82/001 , DP/PROJECTS/REC/3) was approved by the Governing Council at its special meeting in May 1982, for a period of 2 1/2 years. This project was extended in April 1984 for another year by means of a project revision. The project GLO/82/001 carries on earlier work by FAO and UNDP, using the well equipped research vessel Dr. Fridtjof Nansen under a separate agreement with the Norwegian Agency for International Development (NORAD). GLO/82/001 and earlier projects provided developing countries with timely information on fishery resources available within their coastal waters. As a result of changes in the ocean régime, brought

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about by the extension of national control over fisheries through progressive establishment of exclusive economic zones (EEZs), the information provided through this project is of critical importance to developing countries, most of which would not be able to mobilize such surveys on their own.

2. The fundamental requisite for the formulation and implementation of fishery policies of coastal countries is knowledge of the fish resources available in the respective areas of jurisdiction: i.e., the nature of fish stocks, their distribution and migration patterns, their size and their likely potential yields. A better knowledge of the distribution and migration patterns is also essential for determining which countries are concerned with the exploitation of the same stocks. Such information is of value for negotiations on possible allocation schemes of total allowable harvest among countries sharing the same stocks. The project's valuable assistance in this regard to many countries was confirmed in October 1983 by many delegations to the Technical Phase of FAO's World Conference on Fisheries Management and Development.

3. The larger developed countries bordering on temperate waters, with a long history of marine biological research and a good series of fishery statistics, have established most of the methods for evaluating fishery resources. These methods are less useful for developing countries where statistics are often unavailable, and even the identification of species is often uncertain. There is a need to carry out further studies and to develop techniques which would enable these countries gain a better knowledge of their resources. Among these techniques, acoustic surveys have proved particularly useful when supported by test fishing. The project has concentrated on this approach.

4. Acoustic survey methods, supported by test fishing, are now used extensively in tropical waters by many countries and the work performed by the project, and past projects, has contributed significantly to the development of the methodology in current use, particularly in regions which have large resources of pelagic stocks. Such surveys prove to be of great value for the determination of the total biomass in the unexploited areas, as well as for monitoring the state of fluctuating stocks, particularly if the surveys are carried out in series over several seasons.

5. The vessel Dr. Fridtjof Nansen has surveyed the west coast of Africa over several seasons, providing important information on migratory stocks, so essential for efficient management. The Arabian Sea is another area in which this concentration of effort over several seasons is currently being applied in a programme of work which started in February 1983 and is expected to be completed by September 1984. Under this survey programme, intensive work is being carried out in the EEZs of Pakistan, the Islamic Republic of Iran, Oman, Democratic Yemen and Somalia on the small pelagic (upper level), meso-pelagic (middle-level) and demersal (sea bottom) stocks. To a lesser extent, the work also provides oceanographic information related to pollution in co-operation with specialized agencies in Oman. In addition, during this programme, the project concentrates on the testing of fishing gear for harvesting the large meso-pelagic stocks previously located by the vessel DR. FRIDTJOF NANSEN. Impressive results were obtained during February 1983 from trials with specially designed nets which indicated that good catch rates could be obtained by suitably equipped commercial fishing vessels.

6. GLO/82/001 has also conducted individual surveys which have proved to be of great value giving, often for the first time, realistic estimates of the resources available. Madagascar (surveyed in June 1983), the Maldives (surveyed in August 1983) and Ethiopia (surveyed in February 1984) are examples of countries which have found the outputs of the surveys to be extremely valuable. The reports of these surveys contain details of the distribution and composition of the stocks, together with recommendations for follow-up work. This type of survey was made possible by closely integrating the NORAD bilateral programme in East Africa with that of the project in planning the survey vessel's movements to obtain optimal use of the available seetime.
7. The project's work on species identification has added greatly to the knowledge of fishery workers from countries participating in the surveys made by the vessel Dr. Fridtjof Nansen especially by practical demonstration through the use of draft species identification sheets prepared for the western Indian Ocean, which allowed identification of nearly all species taken by the vessel. The project has made a significant contribution to the available reference material on species identification by providing new field information on commercial species from the western Indian Ocean and also by enabling the FAO Species Identification Sheet and Species Synopsis Programme to produce new world-wide species catalogues by main commercial groups of marine resources. Two of them (Scombrids and Cephalopods) have already been printed and one (Sharks) is currently in production. The complementarity of the UNDP-supported project with FAO's regular programme in fish identification has been highly beneficial.
8. Representatives from local fisheries research institutions have participated as research assistants and for training purposes in cruises made by the Dr. Fridtjof Nansen since 1975. As a result, over 160 different scientists from some 34 countries have been given training. In this regard, the contribution of the Institute of Marine Research, Bergen, Norway, has been invaluable.
9. In November 1982, NORAD conducted an evaluation of its participation in the operation of the research vessel Dr. Fridtjof Nansen. The final report recommended that NORAD should continue to support the programme and that the survey work should be continued with greater concentration of effort in order to secure the integration of survey work in the fisheries development in the recipient countries. The evaluation mission found a need to improve the reporting system and NORAD endorsed this finding. Subsequently, with the co-operation of the project, seminars were held in Kenya and Tanzania in March 1984 with a third to be held in Mozambique in late May 1984. The seminars set out to present information on the fish resources of these countries based on the work of the research vessel Dr. Fridtjof Nansen, UNDP/FAO, NORAD and other bilateral agencies. NORAD also proposed to assist the project in effecting long-term planning by linking the planning of its bilateral commitments with the project's programme and called for a continuation of the involvement of UNDP to the end of 1988, at which time the vessel Dr. Fridtjof Nansen would most likely be phased out of service. In addition, NORAD exceptionally increased its contribution towards the operational costs of the vessel Dr. Fridtjof Nansen from 60 per cent to 80 per cent effective from 1 January 1984.

10. UNDP discussed the evaluation report and its implications for the project with FAO, NORAD and the Institute of Marine Research in October 1983 and acknowledged the need for the continuation of the survey programme. These discussions led to the above-mentioned project revision covering 1985 and to the current proposal for supplementary assistance through December 1986.

II. THE PROJECT

11. The main purpose of the supplementary assistance is to continue the programme of surveys by the vessel Dr. Fridtjof Nansen in selected areas not previously surveyed, or for which sufficient data are not available, through greater concentration of effort for which long-term planning is essential. The recommendations of the evaluation report will provide useful guidance. Specifically, the work will involve:

(a) Extension of the contractual agreement with the Institute of Marine Research to the end of 1986;

(b) Regular planning meetings with NORAD and the Institute to develop the survey programme and, in co-operation with UNDP, to set priorities within the programme;

(c) Arranging for access to survey areas and the preparation and dissemination of reports;

(d) Following up on development possibilities and giving advice in areas already surveyed and where exploitable stocks exist. Examples of such areas of immediate interest are the waters off the Arabian Sea off the coasts of Somalia and Mozambique.

12. The activities, which will include fielding consultants in stock assessment and species identification, will be co-ordinated by FAO and the project will work closely with UNDP resident representatives and bilateral agencies having ongoing programmes in fisheries in the countries served. In the case of Somalia, the project will work closely with the World Bank, which intends to conduct an intensive programme of pre-investment work on the small pelagics which have been located and surveyed by the vessel Dr. Fridtjof Nansen.

13. The main objectives of the project are:

(a) To conduct extensive acoustic surveys and trial fishing in the EEZs of selected participating countries as a means of providing a rapid assessment of total stocks and approximate composition of those stocks;

(b) To improve acoustic survey techniques for the assessment of small pelagic, meso-pelagic and demersal resources, and to develop further the methodology for the conversion of biomass estimates into estimates for potential yield;

(c) To provide on-the-job training to biologists and acoustic engineers in the design, execution and data interpretation of acoustic surveys.

14. The outputs expected as a result of the supplementary assistance will be additional information on stocks surveyed, a long-term monitoring plan for countries participating in the surveys and commentary, as well as technical reports, aimed at informing policy makers of conclusions and recommendations. The project will also aim to strengthen links between development agencies and participating countries and to provide information to regional bodies for management purposes.

15. FAO will continue to execute the project, which is designed as an integral component of FAO's comprehensive programme of assistance in the development and management of fisheries and will continue to complement the ongoing fisheries development programmes assisted by UNDP at the country and regional levels.

16. As a special contribution to the project, NORAD has agreed to make the research vessel Dr. Fridtjof Nansen available under a separate agreement with the Institute of Marine Research and to continue to fund 80 per cent of the operational costs, while the UNDP project will fund 20 per cent. The costs of operation include the scientists, acoustic technicians and gear technologists assigned by the Institute, as well as the cost of new instrumentation which is required to maintain the vessel as one of the best equipped for this type of work. In addition, the full services of the Institute for data processing and the production of cruise reports will be available to the project.

17. The expenditure components of the proposed UNDP assistance are as follows:

	\$
Project personnel	39 000
Subcontracts	380 000
Miscellaneous	9 000
Total	<u>428 000</u>
