



"Fisheries Information and Analysis System (FIAS)" Project

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Introduction

In 1990 the Sub-Regional Fisheries Commission (SRFC) made a request to the European Commission to set up cooperation in order to develop what was intended to be a classical data base for the requirements of the SRFC providing support for the elaboration of fisheries sector policies. Since then, several stages have been completed, which led to the signing of the financing convention of the Conakry-based (Guinea) FIAS project in April 1999. This project is guided by an ACP-EU Coordination Unit assisted by a senior scientific advisor. Actual project operations are due to start before the

end of 1999 and run for a duration of three years.

The six SRFC member countries believe that the strengthening of their regional cooperation through this project and their collaboration in a new type of balanced partnership with the relevant European partners constitutes a significant contribution towards joint development of resources shared by two or several countries. This understanding is based on a spirit of equality, mutual benefit and respect, in accordance with the guidelines discussed and adopted by common agreement. The EU has provided financial support to this project in this same spirit.

The project seeks to benefit from data previously collected, which have not yet been thoroughly analysed, in order to achieve better use of efforts already undertaken and provision, in an adequate format, of information feedback to the «users». This information should enable direct inference to be made regarding the state of resources, based on various reference levels and expected response to different types of operations, including international, regional and national legal frameworks. This means that the project will:

- make use of national structures i.e. one or several teams entrusted with the monitoring of specific tasks and cooperation with the other partners involved at the national and sub-regional level.
- operate with the data available to the project partners both in the sub-region and outside, without seeking to acquire new data from scientific surveys;
- work with interested partners and take into account ongoing cooperation;
- develop the capacity for analysis of all the partners by setting up common standards to be used in the national databases and in development work.

Partners in this project will in particular be required to verify the hypotheses on the use of fisheries resources: they will provide evidence on:

- changes in species composition within the groups being exploited;
- long term effects of fishing, in particular a possible decrease in the trophic level of catches; whether lower trophic level catches are offset by increased catch volume.

Project objectives

The specific objective of the project is the following: to strengthen the good management of



Trawler unloading catch in Nouadhibou - Chalutier déchargeant ses captures à Nouadhibou



fisheries resources at the national and sub-regional levels. For this purpose the project will develop and implement an interdisciplinary system of fisheries information and analysis, in order to enable decision makers to make full and lasting use of this information. It will thus guarantee the availability of timely relevant information thus contributing both to economic efficiency (lasting economic benefit for the various players, particularly investors and fishermen), social benefits for all and the conservation of biodiversity.

Beneficiaries and main players

The final beneficiaries of the project are the fishermen, processors, traders and investors in the fisheries sector in the six following countries: Cape Verde, Gambia, Guinea Bissau, Guinea, Mauritania and Senegal.

Project partners involved in the Sub-Regional Fisheries Commission (SRFC) include the following research centres:

- Centre National de Recherches Océanographiques et des Pêches (CNROP), Mauritania;
- Centre de Recherches Océanographiques de Dakar Thiaroye (CRODT), Senegal;
- Centre National des Sciences Halieutiques de Boussoura (CNSHB), Guinea;
- Centro de Investigação Pesqueira Aplicada (CIPA), Guinea Bissau;
- Instituto Nacional do Desenvolvimento das Pescas (INDP), Cape-Verde;
- Fisheries Research Unit (FRU) of the Fisheries Department, Gambia.

These fisheries research institutes and institutions will strengthen their cooperation with European institutions, through experts in chosen areas, selected on their commitment to repatriate data to the countries of the sub-region and their complementarity, and with FAO.

The following are the European institutions involved:

- Institut de Recherche pour le Développement (IRD); France;
- Ecole Nationale Supérieure Agronomique de Rennes (ENSAR), France;
- Institut Portugais de Recherches en Sciences et Technologies de la Mer (IPIMAR), Portugal;
- Instituto Español de Oceanografía (IEO), Tenerife, Spain;
- Space Applications Institute (SAI), Marine Environment Unit (MEU), Italy;
- Joint Research Centre (CCR), Space Applications Institute (SAI), Italy - for coordination aspects.

Project Modules

Project modules are all interdependent, including three modules devoted mainly to standardisation of existing data and initial analysis (i.e. FishBase, TrawlBase and StatBase) and three for traditional and advanced analysis (FiSAT, Ecopath with EcoSim and a Geographic Information System, GIS)

In this context it should be stressed that there is no miracle tool for data analysis and that the various methods are complementary. For this reason, traditional, monospecific, analysis applications should not be discarded, in particular FiSAT (developed and supported by ICLARM and FAO). These analytical tools remain useful to parameterize trophic models and they deserve to be maintained.

During this initial phase, the FIAS project will give secondary priority to oceanographic and climatic aspects, pelagic resources, economic aspects and market analysis. However, the option to invest more heavily in these areas, especially the economic ones should be maintained, if adequate analytical tools and appropriate data sources become available. On the other hand, the analysis of strategy responses and fishing tactics is the responsibility of national administrations.

Communication via web sites, publications, round tables and other means is the main vehicle for bringing research results to the decision-makers and other players in the sector.

FishBase

One of the first jobs will be to reinforce the knowledge of national fish populations by using the FishBase tool (see e.g. this *Bulletin* Vol. 10(2) June 1998 and 11(1) March 1999). The advantages of use by and input from the national FishBase partners are (i) standardisation of species names to allow exchange of information between different tools using the same approved international nomenclature and (ii) availability of a user-friendly tool to search for biological characteristics relating to catches (required for the parametrisation of fisheries management models).

Expected Results: A locally produced version of FishBase containing all available information (repatriated or local) on the biodiversity and biology of fish in the six SRFC countries, which is compatible with the other output of this cooperation.

TrawlBase

The TrawlBase software is retained to make optimal use of existing data in reconstructing former states of fishery resources. TrawlBase is a tool for the representation and initial analysis of data from experimental trawling campaigns, which includes data from campaigns that have already been analysed. It represents an improved version of NAN-SIS, a software format in

which some data from the sub-region is already available.

Expected Results: for each country of the SRFC in which trawling surveys have been undertaken and unrefined data has been retrieved, the results of these surveys will be available to evaluate stocks, and particularly to serve as references against which the status of present stock can be assessed.

StatBase

StatBase represents an aid to setting up statistical systems for fisheries or for facilitating exchange of information between various components of existing, complete or partial systems. It also provides support for the development of such information both in relation to resources and to fishing fleets.

Expected Results: Based on consultation with interested departments, specifications will be defined and the tool will be developed; in each SRFC country, staff from the partner institutions will be trained (on-the-job training, dissertation etc.) Well presented statistical resumes, tables, maps and other items will be made available to decision-makers.

Ecopath and EcoSim

These programs are used for marine ecosystems modelling based on the trophic relationships between species or groups of species, which enable the assessment of resources in a plurispecific framework. These models have proved to be suitable for the representation of ecosystems at a lower level than that of large marine ecosystems, generally in production zones with extensive data. The development of such models and their comparison along gradients is at the heart of a «concerted action» financed under the 4th Programme Framework for Research of the European Union. At present this scientific cooperation covers 31 partners, including Cape Verde, Guinea, and Senegal. This approach also has the support of the FAO and is applied world-wide (over 80 models already published and others underway).

Expected Results: For each of the six countries at least one Ecopath model of a major fisheries resources system will be built to which Ecopath can be applied in order to produce and compare different management systems. Such a model can also be used to raise managers' awareness of the impact of such systems.

Three sub-regional Ecopath models will be built by the teams participating in the project in order to make a thorough study of the interactions between the ecosystem components in use on a real scale, which usually extends beyond a single country. This concerns the following three systems:

- Northern continental platform (Mauritania, Senegal and Gambia);



- Southern continental platform (Guinea and Guinea Bissau);
- Cape Verde reef platform.

This will make new information and analyses available to decision makers and stakeholders in the sector and will better enable them to assess their options in terms of investment and development. It will thus be possible to consider options for restoration of lost productivity, such as marine reserves, their most effective location and size, etc.

Geographic Information Systems (GIS)

In order to maintain the capacities acquired in the sub-region during the GIS project, additional training will be envisaged and appropriate data will be compiled and analysed in GISs that are best able to represent the dimension of fisheries in terms of space, of their natural and socio-economic environment. The relevant oceanographic data and outside databases will therefore be made available and combined with other available types of information.

Expected Results: At least one 'basic GIS' on a scale compatible for the entire sub-region will be available in each country and for the sub-region; reduced versions will be available on the partners' web sites.

Module Implementation

Module implementation will largely be the responsibility of the research institutes in the SRFC member countries. In each partner institution in the sub-region a national coordinator will mobilise individuals and local teams able to contribute to the joint work and profit from it. Each institution will receive hardware (computers and peripherals) and the basic software.

The brief of the national module coordinators

1. Active cooperation with the FIAS Coordinating Unit and the regional training node of the FishBase project (Central and West Africa - CRODT);
2. Dissemination of FishBase products in the country to allow constructive cooperation with other interested partners;
3. Setting up and updating a web page on national FIAS activities based on input from all the modules;
4. Encoding of all the data concerning the relevant trawling campaigns;
5. Preparation of various products (together with the coordinators of the 5 other countries) e.g. atlas, regional CD-ROM, etc.;
6. Maintaining good relations with all the services dealing with statistics concerning fisheries and its sector in order to ensure cir-



Nouadhibou is one of the centres of industrial fishing in the region - Nouadhibou est un des centres de la pêche industrielle dans la région

ulation of information among all participants.

Activities involving sharing of results and acknowledging feedback from stakeholders

The results of making various types of data available, their analysis and the activities generated by the project will be presented on a FIAS web site by the partner institutions in each country. The SRFC and the project's Co-ordination Unit will also have their own web sites in order to enable a wider public to follow project developments and interact with the project teams.

Results - even partial and intermediary - will be presented once a year during a 'round table' attended by players from the sector (government, small and large-scale investors, various decision-makers within the sector, etc.). At the same time, feedback from the stakeholders should facilitate possible adjustment of the thrust of the project on the basis of the priorities perceived by the players involved.

Role of the SRFC Permanent Secretary

The SRFC has an important co-ordination role to play to ensure the necessary synergism between the various projects that support fishery initiatives and activities in the SRFC countries. Its web site will facilitate information exchange and limit related costs.

Role of the ACP-EU Co-ordination Unit

The role of this unit will be to supervise, coordinate, provide technical support and create a favourable work environment so that all the partners can participate in a coordinated, useful and complementary manner in order to achieve the objectives of the project.

However, the generally limited means and the inequalities in national research capacities do not always facilitate cooperation. It is recognized that there are discrepancies between countries in terms of collection and processing of data. A flexible approach is thus required in order to be able to adjust to such discrepancies.

In addition to the usual working groups, tools such as publications, trips to provide information and support, a web site will be used to provide useful information to all interested parties. Round tables, etc. will also be given support. The Coordinating Unit, with the support of the SRFC Permanent Secretary will seek to establish links and coordinate activities of the project with those of the other projects. ■

