THE CENTRE DE RECHERCHES
OCEANOGRAPHIQUES DE DAKAR-THIAROYE

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BACKGROUND

The Centre de Recherches Oceanographiques de Dakar-Thiaroye (CRODT) is located in the former Seafood Technology Laboratory built in 1957 to house the Animal Industries and Breeding Service. Until 1974, CRODT depended on the French Scientific Research Institute for Cooperative Development (ORSTOM) after which time it was placed under the auspices of the Agriculture Research Institute of Senegal (ISRA) where the Fisheries Production Research Department is located. Research is currently underway at CRODT involving some forty research scientists and senior technicians.

OBJECTIVES

Senegal is situated in a poor, arid Sahelian region that enjoys an exceptionally abundant coastal region as well as a large continental shelf. The Senegal, Saloum, Gambia, and Casamance rivers that irrigate it also present real possibilities of exploitation, and its fishermen are among the best in the world. It is therefore essential that Senegal exploit this important renewable resource efficiently. It is, however, difficult to rationally plan exploitation of the fisheries as the natural habit is fragile sensitive to changes in the environment, to pollution and overfishing. In addition, the financial and human aspects of fishery projects must be taken into account in every phase of development of the fishery, for both small scale and industrial fishing alike.

The purpose of CRODT research is therefore “the national management of living natural aquatic resources, based on the integration of scientific economic and sociological aspects.”

RESEARCH PROGRAMS

Research is conducted within the context of various thematically specialized study programs, with three of the programs focusing on industrial fishing on trawlers,
sardine boats and tuna boats:

1. **Trawler fishery.** The objectives of trawler fishery are: To study coastal and deep water species with a view towards understanding their biological and dynamic parameters, to evaluate their potential, to determine the impact of fishery, and to identify the conditions of exploitation in order to propose various options for development that would maximize any bio-economic advantages.

2. **Sardine fishery.** The objectives of sardine fishery are: To study the biology and dynamics of the main species of small coastal pelagics of the Senegalo-Mauritanian zone with a view towards a rational management of its stocks which, with a potential estimate of over 1 million tons, represent the largest resource of the region; to study the impact of variability in the environment on the dynamic of pelagic stocks; and to analyze the reaction of the fisheries to the instability of the resource.

3. **Tuna boats**

4. **Artisanal fishery.** Studies small scale fishing, due to the importance of this sector and its distinctive characteristics. This program utilizes a network of researchers and technicians set up on location at every landing site in Senegal. These various programs continuously collect detailed statistics and prepare on-going regional fishery reports.

Various studies are also conducted on the biology (reproduction, growth, migration) of the different species and their catch potential.

5. **Socio-economic of the fishery.** The socio-economy program analyses the economic and social components of the Senegalese fishing system, in both the small scale and industrial sectors.

6. **Environment.** The environment program studies the ocean environment of the region with the goal of determining thermal structures, and circulation and production in that area.

7. **Casamance and Sine Saloum** are multi-disciplinary programs under the regional authority (Casamance and Sine-Saloum).

**LIBRARY RESOURCES**

To assist these different programs there exists:

- A library of 23,000 documents which publishes the serials "Document Scientifique CRODT".
- A research vessel, the Louis Sauger, a trawler of 38 meters built in Japan in 1985 and equipped with the most modern scientific instruments designed especially for studies in oceanography and echointegration.

- A data-processing department which provides and renders operational all means of calculation (software and hardware) required for research and in the administration of the CRODT. The main data processing equipment consists of a high power IBM computer equipped with 10 work stations, as well as numerous microcomputers (IBM, PC XT, AT, and PS) and a high performance BENSON graphic output unit.

- A remote sensing Department called UTIS (Satellite Image processing unit) which is the result of a close collaboration with ORSTOM. It's equipped with a satellite receiving antenna and a complete control system for analyzing satellite images. This unit follows through in real time with surface temperature of the ocean in that region.

This equipment is largely accessible (under certain conditions) to the national and international scientific community, in particular data processing via national and international computer telecommunication systems.

TECHNICAL LIAISONS

The CRODT is collaborating with several laboratories and international organizations for support, training, realizing joint research projects or seeking financial assistance.

- At the national level with Direction de l'Océanographie et des pêches Maritime, Projet de surveillance des pêches au Sénégal, Ministère du Développement Rural, Ministère du Plan et de la Coopération, Ministère Délegué chargé des Ressources Animales, Ministère de l'Equipement; weather forecasts; Agence pour la Sécurité de la Navigation aérienne en Afrique (ASENCA).

- At the sub-regional level with Centre National de Recherches Océographiques et des pêches, Mauritania; Fisheries Department, Gambia; Organisation pour la mise en valeur du Fleuve Sénégal; Conseil sous régional des pêches.

- The CRODT collaborates also with ORSTOM (Institut français de Recherche Scientifique pour le développement en coopération); Institut Scientifique des Pêches Maritimes Morocco; Centre de Recherches Océanographiques, Côte d'Ivoire; United Nation Educational, Scientific and cultural organization (UNESCO); Food and Agricultural Organization of the United Nations (FAO); Comité des Pêches pour l'Atlantique Centre Est (COPACE); Institut Espagnol d'Océanographie Spain; Centre National de Recherches Océanographiques, Madagascar; Station de Recherches Halieutiques, Cameroon; Fisheries Research Unit, Ghana; Far Seas Research
Laboratory, Japan; National Marine Fisheries Service USA; International commission for the conservation of Atlantic tuna (ICCAT); University of the Azores; Canadian International Development Agency, Canada; European Economic Community; United States Agency for International Development.