



CARICOM Fisheries Unit



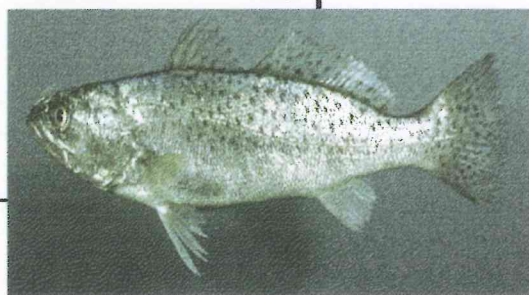
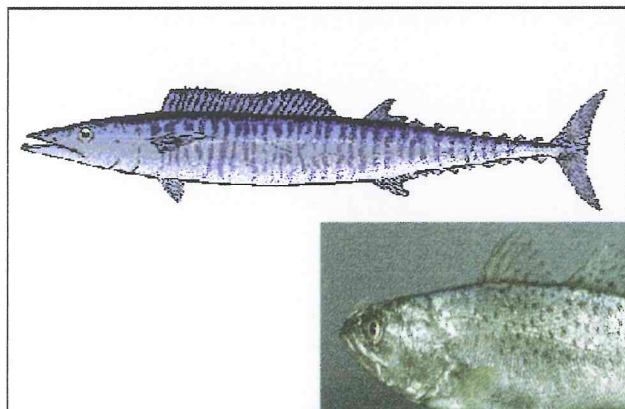
Suriname



European Union

Integrated Caribbean Regional Agriculture and Fisheries Development Programme - Fisheries Component

WORK PROGRAMME FOR SURINAME (April 2000 – March 2005)



Prepared By

Fisheries Department of Suriname and
CARICOM Fisheries Unit, Belize

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LIST OF ACRONYMS

ACP	African, Caribbean and the Pacific States (associated to European Union)
DM	Data Manager
BDC	Biological Data Collection
CANARI	Caribbean Natural Resource Institute
CARISEC	CARICOM Secretariat
CFO	Chief Fisheries Officer
CFU	CARICOM Fisheries Unit
CFRAMP	CARICOM Fisheries Resource Assessment and Management Program
CFTDI	Caribbean Fisheries Training and Development Institute
CIDA	Canadian International Development Agency
CRFM	Caribbean Regional Fisheries Mechanism
DRAO	Deputy Regional Authorising Officer
DOF	Department of Fisheries
DSA	Daily Subsistence Allowance
ECU	European Currency Unit
EDF	European Development Fund
FAC	Fisheries Advisory Committee
FAO	Food and Agriculture Organization of the United Nations
FD	Fisheries Department
FISDC	Fisheries Institutional Strengthening and Development Component
FMP	Fisheries Management Plan
FRM	Fisheries Resource Management
GEF	Global Environmental Fund
HACCP	Hazard Analysis and Critical Control Point
IAC	International Agricultural Centre, Wageningen, The Netherlands
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICLARM	International Centre for Living Aquatic Resource Management
ICRAFDP	Integrated Caribbean Regional Agriculture and Fisheries Development Programme (EDF - funded)
IMA	Institute of Marine Affairs
LRS	Licensing and Registration System
MCS	Monitoring, Control and Surveillance
MTI	Maritime Training Institute
NGO	Non-Governmental Organisation
NFW	National Fisheries Workshops
NMFS	National Marine Fisheries Service (U.S.A.)
NRMU	National Resource Management Unit
OVI	Objectively Verifiable Indicators
PPCU	Programme Promotion and Co-ordination Unit
PRC	Program Review Committee
R & T	Research and Training
RAU	Resource Assessment Unit
RDP	Rural Development Project
SCMA	Standing Committee of Ministers of Agriculture
SFO	Senior Fisheries Officer
SVG	St. Vincent and the Grenadines
TA	Technical Assistance
TAP	Technical and Administrative Provisions (annexed to Financing Agreement)
TC	Technical Committee
TCDC	Technical Co-operation between Developing Countries
TIP	Trip Interview Program (Data collection software package)
T & T	Trinidad and Tobago
UNDP	United Nations Development Programme
UWI	The University of the West Indies
WBS	Work Breakdown Structure
WECAFC	Western Central Atlantic Fisheries Commission of the FAO, United Nations
WP	Work Programme (Work Plan/Cost Estimate/Financial Plan)

EXECUTIVE SUMMARY

This 5 – 6 years programme of support to the Fisheries Department of Suriname is made possible under the Financing Agreement between the Commission of the European Communities and the Member States of CARIFORUM under the ICRAFD programme. It will be implemented in two year Work Plan cycles within agreed areas of focus identified as sub-projects, and monitored annually under an agreed CFU – DoF arrangement.

The programme has been prepared by the Fisheries Department of Suriname in collaboration with the CARICOM Fisheries Unit (CFU) and is based on information obtained during the recent planning mission to Suriname by a team of four officers from the CFU, Belize, 29th May – 5th June, 2000. The team gathered information through literature review of existing documents, discussion sessions with fisheries staff, and meetings with policy makers and other stakeholders in the fisheries sector. Some information was also collected from interaction with respondents of the interviews conducted with the multi-disciplinary survey instruments which were administered during the mission. The Work Plan draws heavily from the Draft Fisheries Management Plan and the Draft 5-6 year Work Plan prepared by the Fisheries Department of Suriname.

Based on the resources available under the CARIFORUM Project and the constraints faced by the Fisheries Division, it will not be possible to undertake activities in all areas needed to achieve sustainable development and conservation of the fisheries resources. The Work Plan will therefore seek to address some of the critical issues affecting the fisheries sector by focusing on:

- development of clear and adequate planning and policies framework;
- improving the fisheries database, information management systems and flow of information to stakeholders for planning and management decision making;
- strengthening human and institutional capacities for resource management and conservation;
- empowerment of resource users so that they can assume greater responsibility for sustainable use and management of the fisheries ; and
- improving public awareness of the benefits and importance of the fisheries sector and the need for sustainable resource management.

Fishery management decision-making and planning must be informed by quantitative information on the structure of the sector and the status of the resources. To this end, the Project will seek to address those issues associated with providing fisheries data for assessment and management and as an effective tool for monitoring and regulating catch and fishing effort.

Therefore, with the intention of providing information for management and decision-making on a continuous basis, the Project will assist the Fisheries Division to strengthen its data collection systems to collect data on length, weight, maturity and hard parts for selected species of fish and shrimp in the respective fisheries. The resulting data, along with catch, effort, economic, social and environmental data, should permit qualitative and quantitative evaluation of the impact of the fishery on the population structure, including estimates of fishing mortality, current abundance and status of exploitation, trends in recruitment and projected future abundance, and allowable catch under given management regimes. Biomass dynamic models, length based assessment techniques/models as well as bio-economic models will be utilized in these assessments.

The project will provide technical and financial assistance to the Fisheries Department for the collection of catch, effort, biological, social and economic data for selected species and fisheries within the refined data collection system. Training will be provided to Fisheries Department staff in data collection, management and analysis. Selectivity studies for specific fishing gear such as the gillnet for large demersals, trawls and njawaries will be conducted. Technical support will be provided for the assessment of the red snapper fishery; the development of bio-economic models for the seabob and penaeid shrimp fisheries; development of an ecosystem model of the fisheries. Support will also be provided for Suriname's continued participation in the Ad Hoc Shrimp & Groundfish Group for the Guiana– Brazil Shelf. The project will also provide support for the preparation and dissemination of the data and information obtained through the preparation of regular technical reports and articles.

BACKGROUND

About The Work Plan

The Work Plan for Suriname is a key document under which project activities are planned, implemented, monitored, and assessed. All funds and technical assistance will be provided to Suriname and spending must be based on the approved work plan. The Work Plan has therefore been prepared with the aim of providing as clearly and concisely as possible a comprehensive description of the project activities, responsibilities, budget, implementation schedule and reporting requirements.

A 5-6 year programme of support will be implemented in two year work plan cycles. This work plan is based on preliminary data garnered during the recent planning mission to Suriname by a team of four officers from the CFU, Belize, 29th May – 5th June, 2000. The team gathered information through literature review of existing documents, discussion sessions with fisheries staff, meetings with policy makers and other informed stakeholders at the landing sites and communities. A Draft two year Work Plan and the Draft Fisheries Management Plan prepared by the Fisheries Department of Suriname provided very useful information as resource documents. Some information was also collected from interaction with respondents of the interviews conducted with the multi-disciplinary survey instruments. The latter included:

- A Baseline Survey of seven (7) fishing communities in Suriname
- A Baseline Survey of the Fisheries Department of Suriname
- Key Informant Interviews
- Interviews on the status of the Data Collection programs of Suriname

The Fisheries Department will be responsible for implementing the activities in this Work Plan. Technical assistance and support will be provided by the staff of the CFU, technical experts from the other CARIFORUM Countries (through TCDC arrangements) and consultants where necessary.

Introduction

Fisheries and aquaculture presently make a significant contribution to the economies of CARIFORUM countries. This contribution can be enhanced by a combination of management and development interventions. Within the EDF Funded Integrated Caribbean Regional Agriculture and Fisheries Development Program, there is a component designed to promote the sustainable utilization and management of the fisheries of the CARIFORUM countries. The overall objective of the fisheries program is optimal utilization of marine fishery resource in CARIFORUM countries through optimal sustainable harvesting and optimal post harvest utilization of marine fishery resources. Fishery management would be enhanced by strengthening the capacity of national Fisheries Departments and regional institutions which are responsible for formulation of fishery management policy and implementation. This project is being executed by the CARICOM Fisheries Unit, located in Belize, Central America.

It is recognized that one of the fundamental problems facing the fisheries of the region is the open access, common property nature of the resource system. Accordingly, one of the main challenges faced by countries is the transformation towards a closed access system with clearly defined and equitable rights of access to the resource. Other significant problems include;

- the lack of high level support and clear policy, particularly with respect to resource management and conservation viz fisheries development;
- lack of reliable data and information for planning, decision-making and policy formulation;
- inadequate human resource and weak institutional arrangements for research, planning and decision-making at both governmental and non-governmental levels;
- inadequate resource management regimes and lack of enforcement of regulations;
- limited involvement of resource users and other stakeholders in planning and decision-making; and

WBS 300: FISHERIES MANAGEMENT DATA SYSTEMS

Introduction

Fishery management decision making and planning must be informed by quantitative information on the structure of the sector and on the status of resources. From information garnered during the Planning Mission to Suriname and informal discussions and interviews held with Fisheries Department staff, the strengths, challenges and weaknesses in the current Data Management System were highlighted.

The Suriname Fisheries Department began routine data collection in 1990. Data is collected from boats at sea (Observer Program), landing sites, processing plants and the various markets. The major data collection instruments are Logbooks and routine forms. Logbooks were introduced for shrimp trawlers, but never with satisfactory results as the logs used to be filled by onshore personnel from information gathered from conversation with the captains. A number of enumerators visit landing sites depending on the sampling scheme prepared on a monthly basis. The landings are recorded for each vessel sampled that day.

For the catch and effort data collection system, data element such as, species, weight, number of boats by gear type, number of fishermen and boat size are recorded. Length frequency and sometimes maturity data are the biological elements recorded. The number of days at sea is recorded for the vessels that perform trips involving several days (trawlers, coastal gillnets). For the rest of the fishing vessels, the number of trips is recorded. The Licensing and Registration system captures data on the number of crewmembers and the vessels are registered

In Suriname a fleet is defined as a combination of boat and gear. The fishing grounds targeted by the different fleets are sea, estuaries, brackish lagoon and inland rivers.

From data obtained from the questionnaires and information provided during group discussions there are some weaknesses in the data collection and management systems that need to be addressed, these include:-

1. Lack of consistency in the collection and recording of important data elements over time and space, leading to incomplete time-series which are needed for application of some of the standard assessment models.
2. The need to obtain information on new fisheries (e.g. snapper fishery) and landing sites that have emerged over the past five years that are not covered in the current sampling plan.
3. Collection of biological data for additional commercially important species, as biological data is currently collected for only a few species of fin-fish and shrimp.
4. There is need to obtain a data management software for data storage and manipulation. The current software being used (Microsoft Excel), is not adequately addressing the data management and analysis needs of the department.
5. Training for data collectors is essential, as several data collectors indicated in their interviews that data collectors are inexperienced and lack training. This will be extremely important for the biological data collectors. The lack of enough data collectors was recognized as a human resource problem.
6. Lack of resources for the data collection program - lack of transportation and fuel have been highlighted as a concern by the data collectors, as this affect their ability to adequately carry out their data collection duties.

- The resource person will work in close collaboration with the Director of Fisheries, Data Manager, Fisheries Officers, Data Collectors/Observers to conduct the assignment and to facilitate technology transfer to these personnel.
- The resource person will visit Suriname where he/she will conduct a thorough review and analysis of the data collection program in keeping with the above stated objectives. This will include review and analysis of the data from the Marine Fishery Census 1995, the existing Licensing & Registration System, the existing catch, effort, biological and economic data collection programs, including the data collection forms and logbooks, the computerised databases and reports, including the Draft Fisheries Management Plan for Suriname. Visits to landing sites, wharves and processing plants to observe data collection activities and interaction between the fisheries personnel and the fishers will also be made.

Outputs

The outputs of this activity will be:

- Review and analysis of the data collection and management program for the industrial, coastal and brackishwater fisheries, including the data collection forms and logbooks, the field data collection programs, computerised databases and reports in Suriname, with recommendations for refinement.
- Suggestions for the most suitable means to obtain data on the discards at sea by the various gear types in the industrial, coastal and brackishwater fisheries.
- Indication as to whether adequate data exists to conduct selectivity studies for the gillnet fleet for large demersals, trawls and njawarie nets of different types, and/or provide advice on the appropriate studies to gather such data for analyses.
- Indication as to whether adequate data exists to determine growth and mortality parameters for the main commercial species, including those from the large demersals, small soft-bottomed demersal fish and penaeid shrimp, and/or provide advice on the appropriate studies to obtain such data for analyses.
- Review the types of economic data being collected and provide advice on the additional data to be collected in order to monitor the performance of the fleets in the respective fisheries as well as provide information for management.
- Suggestions for refining the data collection elements regarding fishing effort.
- An Implementation Plan, with schedule, to integrate the improved onshore and offshore catch and effort, biological and associated economic (and social) data collection programs into a comprehensive fisheries data collection system for the industrial, coastal and brackishwater.

WBS 310.2: Enhance data collection plans covering the major fisheries

This activity will involve enhancing the current sampling plan for the industrial, coastal and brackish water fisheries to capture data on the number of fleets and/or discrete unit of fishing activity, description of the fleet, changes in fishing areas, changes and development in gear and fishing strategy used, and change in species targeted. This will include re-organizing and re-starting the observer program for collection of catch, effort, and biological data at sea.

For each fleet or unit of fishing activity, the following data will be collected:

- monthly details on the total catch and or landings taken by the fleet;
- monthly details on the total effort exerted by the fleet, e.g. total days at sea, trawl hauls and total number of hooks;
- number of crew per trip;

- Implementation of the modified sampling plan will be the responsibility of the Fisheries Department with technical assistance and funding provided by CFU staff, regional experts and consultants as needed.
- Provide additional human resource and equipment for data collection, management, analysis and reporting.

WBS 310.3: Train fisheries divisions staff in data collection

Following the modification of the current sampling plan all the existing staff-involved in data collection and management as well as newly recruited staff will participate in workshops on data collection and management. At these workshop, the participants will be trained in data collection, data entry using TIP, and quality control and reporting.

Purpose

The purpose of this activity will be to upgrade the skills of existing data collection and management staff as well as train the new recruits.

Approach

The training will be delivered by resource personnel from CFU and the Fisheries Department (Suriname).

Outputs

Fisheries staff trained in areas of catch, effort and biological data collection, environmental, social and economic.

WBS 310.4: Database software for data storage, basic analysis and reporting

Microsoft Excel is currently being used for data (catch, effort, biological and economic) entry, storage, manipulation and analysis. The Fisheries Department staff expressed the need for a data management software as Microsoft Excel was not adequately addressing all their needs.

Purpose

The purpose of this activity will be to:

- Review the current database software.
- Consider the suitability of TIP for data entry, storage, manipulation, basic analysis and reporting.
- Identify and train suitable Fisheries Department staff to manage/operate the system.

Approach

- A resource person with data management skills and experience in using Microsoft Excel from the CFU or from within the region or a consultant will undertake the assignment in collaboration with the Fisheries Department. This individual will have a working knowledge of TIP, experience in data storage, manipulation, basic statistical analysis and reporting.
- The resource person will visit Suriname where s/he will conduct a thorough review of the existing database software for collecting catch, effort, biological, social and economic data. This activity will be merged with WBS 320.4.

WBS 310.8/320.7: Monitoring

The Data Manager will be making monitoring visits to Suriname over the life of the program to evaluate the progress of the activities associated with the data collection system and to provide assistance and advise during implementation of the project activities.

WBS 320: LICENSING AND REGISTRATION SYSTEM

WBS 320.2: Enhance Licensing and Registration System

The current Licensing and Registration system in Suriname utilizes a card system as well as limited electronic storage of data. The system does not have the capacity to adequately meet the needs for the effective licensing, registration and monitoring of fishing vessels and fishers from the various fisheries.

Purpose

The purpose of this activity is to:

- Review the existing licensing and registration system to make it more effective as a tool in the monitoring and regulation of the industrial, coastal, brackish water and freshwater fisheries.
- Consider LRS for data entry, storage, manipulation, basic analysis and reporting.
- Identify suitable Fisheries Department Staff to manage/operate the system.

Approach

- Resource person with data management skills and experience in using Microsoft Excel from the CFU or from within the region or a consultant will undertake the assignment in collaboration with the Fisheries Department. The resource person will have working knowledge of LRS and TIP, experience in data storage, manipulation, basic statistical analysis and reporting.
- The resource person will visit Suriname where s/he will conduct a thorough review of the existing Licensing and Registration System. This will include review of the manual/card system as well as any electronic recording of data on fishing vessels. This activity will be merged with WBS 310.4.

Output

- Review of the existing licensing and registration system with recommendations for its refinement and further computerization.
- An implementation plan, with schedules to implement the recommendations for the refinement of the Licensing and Registration system.
- The availability of database software for data storage, manipulation, basic analysis and reporting.
- Fisheries Department staff identified to operate the system.

WBS 320.5: Provide resources for implementation

The Licensing and Registration System will require at least one computer, with adequate resources, and software to support data entry, basic analysis and reporting.

WBS 400: FISHERIES RESOURCE ASSESSMENT

Developing sustainable fisheries in the region requires comprehensive, coordinated policy and plans based on a good understanding of the fishery resource, the marine environment which supports the resource and on the social and economic conditions of the people and organizations that depend on the resource. Information on these issues is therefore one of the cornerstones for sustainable fisheries development. Not only are scientific and technical knowledge valuable, traditional knowledge accumulated by resource users over generations is also equally valuable for resource management and conservation. Not only are the fisheries systems complex, the research and information needs are also complex and demanding. Information is needed on the oceanographic characteristics of the area; the ecological and biological aspects of the fisheries; and the socio-economic aspects of the fisheries.

Oceanographic studies to understand the physical, chemical and biological features of the region's fisheries and marine ecosystems require expensive research vessels, equipment and highly trained personnel, as well as long time series of data.

Biological and ecological studies on fish stocks also require significant investments in highly trained specialists, research equipment and laboratory facilities as well as the gathering, analysis and interpretation of long-time series of data, including the catch and effort and biological data, in a coherent and consistent manner.

Social and economic studies while less expensive and less demanding than the others also require significant investments in trained personnel, funds, material and infrastructure. Given the socio-economic characteristics of the fisheries resource this type of research is essential for conservation and sustainable development. Socio-economic information on the fisheries is very scarce as traditionally efforts have been directed at gathering biological, ecological and to a lesser extent oceanographic information.

In the Draft Fisheries Management Plan of Suriname, priority areas for investigation for each fishery/management unit have been identified. Based on the resources available for Suriname under the CARIFORUM Project and the constraints faced by the Fisheries Division, it would not be possible to undertake activities in all these areas. As such, with the intention of providing information for improved management, the Project is proposing to assist Suriname in a review of its historical data (catch, effort, biological, social and economic) from the industrial, coastal, and brackishwater fisheries and undertake analyses, that may be possible, in keeping with the information needs for management; the collection of biological, social and economic data for selected species and fisheries within the refined data collection system; conduct selectivity studies for specific fishing gear; provide technical support for the assessment of the red snapper fishery, at the national level; assist in the development of bio-economic models for the seabob and penaeid fisheries; and support Suriname's continued participation in the Ad Hoc Shrimp & Groundfish Group for the Guiana – Brazil Shelf.

Work on oceanographic factors requires significant investment in personnel and equipment. It is not proposed that the project invest much in this area, although it is recognized that environmental and oceanographic factors have a significant influence on the abundance and distribution of the fish stocks. Nevertheless useful data can be obtained from other agencies in Suriname and the Caribbean Region which are monitoring environmental factors, such as rainfall, temperature changes and current patterns. The project will encourage closer collaboration among the Fisheries Department and these agencies and institutions in Suriname and the Region involved in environmental research and monitoring in order to obtain some of the information needed.

To participate in the regional initiatives (Ad Hoc Shrimp and Groundfish Group for the Guiana-Brazil Shelf) to assess the red snapper resources that would result in improved information for management of the stocks at the national and regional levels.

Approach

This study could be done by a student from Suriname or any other CARIFORUM State as an advanced degree. The student would be supervised by the university with support and co-ordination provided by CFU staff. CFU staff and the Fisheries Department would collaborate in developing the detailed plan for the study and refining the data collection programme for the red snapper fishery. They would seek to ensure that adequate mechanisms (onshore and offshore) are in place to collect catch, effort and biological (length, weight, hard parts, maturity) data from the vessels licenced to operate in Suriname's waters as well as monitor those gear (e.g.) that are fishing snappers indirectly by way of the onshore data collection system and the observer programme.

CFU will support Suriname's participation in at least two of the stock assessment workshops of the Ad Hoc Group.

The output of this activity will be:

Data being collected on an on-going basis for regular assessment of the red snapper fishery.
Analysis of the data collected and preparation of management recommendations
Information available for management of the fishery at the national and regional levels.

WBS 421.4: Bio-economic Modelling of the Fisheries

With the coming into being of the seabob trawl fishery in 1996, a number of issues have arisen, among these being:

- The effect of trawl fishery on the chinese seine fishery for the same resource both in terms of yield as well as income to the fishermen.
- The need to determine the appropriate effort (number of trawlers) to operate in this fishery in terms of sustainable catches and earnings.
- The effect of the seabob fishery on the penaeid shrimp fishery.

In order to effectively manage and conserve these resources (sea-bob, penaeid shrimp) as well as safeguard the incomes of those involved, as well as to avoid conflict, it would be necessary to determine the resource and gear interactions as well as the effects on the earnings of the various stakeholders so as to better manage these fisheries.

Purpose

To use multi-fleet and multi-species bio-economic models to obtain information for the management of the seabob and penaeid shrimp fisheries.

Approach

The study could be undertaken by a student as part of an advanced degree program or alternatively by the CFU and the Fisheries Department staff, with technical assistance from a fisheries bio-economist. Assessment of the seabob and penaeid shrimp fisheries will be undertaken using bio-economic models. Some of the bio-economic models which can be utilized such as multi-fleet /single species models or multi-fleet /multi-species models are being tested by the AD Hoc Shrimp and Groundfish Group of which Suriname is a member. Also, the same models can be used to include the effects of the environment (e.g. rainfall, river outflow) on the fishery (ies). This could take the form of a workshop involving the DoF, the stakeholders (who may more readily part with economic data this way) and CFU .

WBS 500 FISHERIES RESOURCE MANAGEMENT

Introduction

This component constitutes one of the main expected results of the project, viz. the strengthened national and regional institutional management capacities. It is the key to the rational utilisation of the resources, and is the product of the amalgamation of biological, social, economic, statistical and environmental knowledge. It should be clearly understood that a thorough multi-disciplinary knowledge is required for effective management, and that this field cannot be claimed by a single discipline. This is reflected in the project's strategy of establishing multidisciplinary survey teams to collect integrated information on the resource users, their numbers, attitudes, strategies, expectations, frustrations, perception of need for management and suggested solutions to problems. The activities have been organized and described under the following headings:

- WBS 510 Strengthened National Fisheries Management
- WBS 520. Strengthened Regional Fisheries Management
- WBS 530 Support Fishers and Community Involvement/Education
- WBS 540 Long-term training
- WBS 550 Monitoring, control and surveillance
- WBS 560 Post-harvest Handling, Processing and Marketing.
- WBS 570 Fisheries Development Planning

The Fisheries Resource Management approach of the project will be similar to the one adopted by CFRAMP, consisting of: strengthening of national fisheries management capability through training, technical assistance and support in the preparation of Basic Fisheries Policy Documents, Fishery Management Plans, establishment of mechanisms for planning and decision making, the establishment and strengthening of a Regional Fisheries Management mechanism, which is expected to continue to provide support for the regional fisheries initiatives.

WBS 510 Strengthened National Fisheries Management

Overview

At the macro-economic level, Suriname has been pursuing similar policies to other CARICOM countries over the past decade, focused on structural adjustments and economic stabilization. The objectives of these programs included: controlling inflation by monitoring the fiscal deficit and monetary supply, including the removal of subsidies; liberalizing the national economy; reforming the financial systems; reducing the state's administrative and technical structure and privatizing state owned organizations to increase efficiency and reduce the public deficit. These policies are likely to continue in Suriname and to have significant impact on the fisheries. A significant part of the means of production in the industry is still owned by the government. The state is by far the dominant actor in shaping fisheries policy. There are very few community based NGOs and no functional fisher's organization actively involved in the fisheries sector at this time.

Macro-economic policies to reduce public expenditure, encourage privatization and facilitate trade are likely to continue and to have a significant impact on the fisheries sector in Suriname. These policies may include further privatization of services and assets and continued reforms within the public service, which could have a direct impact on the functions and staff of the national fishery department.

The national fisheries at this time is not able to adequately carry out their duties related to fisheries management and sustainable development due to limited capacity and operational resources. At the same time the demands on the fisheries department appears to be growing as the government accepts and pursues the principles of sustainable use of fishery resources, responsible fisheries, protection of the

PLANNED ACTIVITIES

WBS 511: National Fisheries Policy, FMP and Advisory/Decision Making Mechanism

The main input in this activity will be technical assistance and funding to the Fisheries Department to define and implement the planned activities. The technical assistance will be from CFU staff, local, regional or EU consultants or through TCDC collaboration with expertise from another CARIFORUM country. The fisheries management plan must be fishery specific, and will be based on the most complete description of the fisheries possible with existing information. Suriname has already compiled considerable information on their fisheries and have started the process of preparation of a FMP, with assistance from an FAO/UNDP Project and a Belgian bilateral support project.

Terms of reference will be developed for provision of technical assistance in preparing and implementing 1) national Fishery Policy, 2) Fisheries Management Plans based on the policies of the Governments and the available information regarding the fisheries and 3) options for national advisory/decision making mechanisms. Consultant/resource person will be recruited, logistical arrangements made for their work and the Fisheries Policies, Fisheries Management Plan and options for national advisory/decision making mechanism prepared.

The process will involve extensive consultations with all stakeholders including government officials, the private sector and the resource users. A series of consultations will be organised at the national level and at community level to discuss the issues and obtain broad base input and support for the exercise.

WBS 512.1: Strategic Review and Up-grading the Organizational Structure and Capability of the Fisheries Department

The purpose of the work is to assist in defining a suitable organizational and institutional structure for the Fisheries Department to enable Suriname to discharge its national and international responsibilities regarding sustainable development and management of the fisheries and aquaculture sector in an effective and efficient manner. The Fisheries Department has been vested with the responsibility and authority to promote sustainable development and management of Suriname's marine and freshwater fisheries resources for the benefit of the people and the social and economic development of Suriname. As such, the Department must be empowered, equipped, organized and staffed to undertake the complex tasks associated with these responsibilities.

The objective of the assignment is to provide the Government of Suriname with a plan for restructuring and enhancing the capacity of the Fisheries Department in Suriname.

An external strategic management assessment of the Fisheries Department will be undertaken during which the key variables that offer opportunities for achieving the overall goal of ensuring sustainable socio-economic benefits from the fisheries sector, and threats that should be avoided, are identified and or validated. The external assessment should focus on indentifying and evaluating the trends, events and developments locally, regionally and globally which could have significant implications for the functioning and success of the Fisheries Department. This will include examination of International Conventions and Agreements such as UNCLOS and the UNFAO Code of Conduct for Responsible Fisheries, regional initiatives such as CRFM and WECAFC, and national developments such as the new fisheries.

An internal management assessment of the Fisheries Department will also be conducted to identify its existing internal strengths and weaknesses in the functional areas that are considered necessary for the successful operation of the Department including management and administration (including finance and accounting), fisheries data and information systems, fisheries conservation and management, fisheries development, aquaculture, monitoring and enforcement, trade and quality assurance, training, the provision of extension and other support services to the aquaculture and fisheries sector. The review should examine and identify the relationship among the various units and functional areas of the Department, including important aspects of the organizational culture which will assist in strengthening the organizational structures. The key success factors and distinctive competencies of the Fisheries Department which have been acquired since its inception and which cannot be easily matched by other organizations should be clearly identified. The review should also examine and document the current

systems. This study could be done by a student from Suriname or any other CARIFORUM State as an advance degree or undertaken by a Consultant. The student would be supervised by the university with support and co-ordination provided by CFU staff.

WBS 520: STRENGTHENED REGIONAL FISHERIES MANAGEMENT

The CARIFORUM Countries have been working to define and establish a Caribbean Regional Fisheries Mechanism (CRFM) to facilitate management of shared stocks and promote cooperation among Caribbean States. Development of the CRFM is one of the main focus of the CFRAMP project at this time. The project will provide support for officials of the Government of Suriname to fully participate in this initiative to define and establish the Caribbean Regional Fisheries Mechanism. Funding will be provided to enable representatives of Suriname to attend the workshops and regional meetings on the CRFM.

WBS 530: SUPPORT FISHERS AND COMMUNITY INVOLVEMENT/EDUCATION

Introduction

The work plan is based on preliminary data garnered during the recent planning mission to Suriname. The planning team gathered information through literature review of existing documents, discussion sessions with fisheries staff, meetings with policy makers and other informed stakeholders at the landing sites and communities. Some information was also collected from interaction with respondents of the interviews conducted with the multi-disciplinary survey instruments. The latter included:

- Baseline Survey of seven (7) fishing communities in Suriname.
- A Baseline Survey of the Fisheries Department of Suriname
- Key Informant Interviews
- Interviews on the status of the Data Collection programs of Suriname.

It was not possible to administer the instrument on the status of fishermen's organizations because none was functioning in the country. Further probing however, revealed the existence of some ad-hoc, temporary categories, that responded strongly to perceived injustices against the interests of the resource users. This indicated that there might be potential leadership material existing, and some possibilities of future development of more or less permanent organizations.

This preliminary work plan will be subjected to some modifications in the near future based on the findings of the multi-disciplinary survey.

The initial sources of information laid bare to the team some areas of serious lacuna which any program developed for community involvement and public education cannot ignore, and must immediately address. These include the following:

- The virtual absence of any tradition in fisheries extension activities.
- The absence of any viable resource user organization
- The lack of knowledge of fisheries laws and regulations among resource users
- The lack of institutional arrangements for enforcing the minimal regulations that remain embedded in the legal documents.
- The weak links among the fisheries department and the resource users and other stakeholders.

From discussions held with the fisheries administration, and based on other preliminary findings, an agreement was reached that the development of any program in Community Involvement & Education must have as its top priority, a vigorous public awareness campaign, which should target not only the direct resource users, but also other stakeholders. These should include the policy makers (both the

WBS 330.2/530.2: Survey of Current Data Collection Issues

This instrument was prepared for Suriname, Bahamas and the Dominican Republic where some form of data collection program do exist. Its objectives are:

- To identify the general issues and the nature of problems, conflict areas which exist, and the strengths and weaknesses of the Human resource area of the program.
- To develop more effective strategies for improving the system through development of awareness and training programs for data collectors and the resource users, and to ensure the cooperation and support of the latter, under the Community Involvement & Public Education sub-project.

In Suriname, 10 (ten) of these instruments were administered to the Data Manager and nine of the Data Collectors. This activity will come to an end with the publication of the report on the findings.

WBS 330.4/531.1: Baseline Survey of Fishing Communities in Suriname

This is a major survey to enquire into and evaluate the social and economic status of the artisanal fisheries sector, the technical aspects of the fishing practices, their traditional management measures (if any) their attitudes, perceptions and behaviours towards fisheries management measures, and their views on elements to include in management plans, and their real and expected roles in the decision making process.

Arrangements were finalized during the Mission for 100 instruments to be administered in seven selected communities, within a fortnight of the end of the Mission, after a Supervisor and four candidates were contracted as Interviewers, and had undergone intensive training.

This activity will be considered completed after the data had been analyzed, and a report prepared and published.

WBS 330.5/531.2: Key Informant Interviews

This is a supplement to the Community Survey, designed to target prominent fishers and residents of the fishing communities and those who control the decision-making machinery. The questions cover broad areas of fisheries policies, development, conservation and management and take a look at the future of the fishing industry. In Suriname 15 of these instruments were administered to traditional leaders, fisheries administrators, boat owners and captains, retired fishers and some prominent women in the communities. This activity will be deemed completed after a final report has been published on it.

WBS 532.0: National Fisheries Workshop

The five mini-surveys that made up the Multidisciplinary Survey were geared towards providing a benchmark upon which future progress in various aspects of the department's work can be measured. Second, they were to provide data that will inform the work planning process and allow for appropriate adjustments to be made to both the work plan for the first two years of this project, and the long term planning process. Third, it could also provide information which could be made available to the decision making authorities on the government side, and begin to bring the direct resource users and other stakeholders nearer to the decision making table.

Summarized versions of the findings of the analysis of the data generated by the survey(s) will form the basis for a 2-day National Fisheries Workshop to be jointly organized by the Fisheries Department of Suriname, and the CFU of Belize.

The outcome of this workshop will be recommendations to be submitted by the stakeholders to government for policy-making considerations. It will also build up the foundation of a comprehensive agenda to be deliberated upon by a National Dialogue Group that will be elected by the Workshop, to be the mouthpiece of the resource users and the other stakeholders, and will form the beginnings of a future National Advisory Committee. This workshop is therefore a crucial milestone in the drive to ensure that the voices of the fishers and their communities are heard in the policy making process.

- Strategies for Planning and Organizing Grassroots Meetings
- Formation and Strengthening of a Core Group
- Formation of Fisher folk Organizations
- Organizing AGMs, Election of Office Bearers and Creation of Committees.
- Training in the a) Occupation of Offices b) Managing Finances and c) Accountability
- "Keeping the Momentum"
- Exploring Extra- Income Generating Avenues.
- Strengthening Fisher folk Organizations
- The Community Empowerment Process

WBS 533.2.1: Public Awareness Campaign

This is the key activity of this work plan. Both the CFU Planning Mission team and the Fisheries Administration agreed on this, given the weaknesses in the socio-economic aspects of the industry; namely, the absence of fishermen's organizations, the virtual lack of knowledge among stakeholders on matters relating to resource conservation and management and the void in operational linkages between the fisheries administration and the stakeholder populace. This intensive and extensive campaign is meant to inform the general public, particularly the resource users and the fishing communities, and keep them abreast of developments in the fishing industry.

It should be a departmental affair in which all levels of fisheries officers will participate. Its success will therefore depend on the level of interest shown and the leadership role played by the Director and the senior hierarchy of the department.

The CFU will provide resources for the employment of a full time Fisheries Officer (Communication) for two years to spearhead this campaign and other Public Relations Activities relating to the Stakeholders in the fishing communities and the industry as a whole. The incumbent should have Advanced Degree in Communication, Sociology, Social Work or any other related Social Science discipline, and should have had considerable experience in the communication and/or Public Relations fields, particularly in the rural setting. Candidates with a first degree and at least 5 years of experience in those areas will be considered. Experience in fisheries will be an added advantage.

The first task will be to identify the key issues and problems relating to the following subject areas:

- Government Fisheries Policies – both existing and up-coming
- Fisheries legislation and Regulations – both existing and up-coming
- Data Collection Rationale and Support
- Licensing and Registration Rationale and Support
- Highlights of Fisheries Management Plan
- Elements of Resource Conservation and Management
- Priorities and Needs of the Resource Users re: the National Dialogue Group
- The second step is to develop communication messages from these issues.
- The third step is to choose from a variety of media for disseminating the messages
- The fourth step is to draw up a time table/program for the campaign.
- The fifth step is to collaborate with the Department in delivering the messages and publicizing the outcomes.

The media to be used could include the Radio, Video, Slide sets/Film Strips, Audio Cassettes, Flip Charts, Printed materials and Folk Media. At the community level, focused group discussions, demonstrations, seminars, public announcements using traditional methods, workshops, excursions, community meetings etc. The choice of medium to use at any particular time will depend upon the nature of the expected audience and the kind of message to be delivered.

The target groups and institutions will include the fishing communities, boat owners, captains, crew, middlemen, vendors, processors, high school teachers and students in fishing communities and the policy- making establishment.

- Elements of Resource Conservation and Management
- Work Planning Techniques

WBS 534.2: Second Fisheries Field Officers Training Workshop

This workshop is scheduled for the latter part of PY 2001-2002. It will concentrate primarily on addressing the weaknesses and problems encountered in the field by the participants of the first workshop. Additionally it will take on board, issues relating to Fisheries Management Planning and Plans and the Role of Fishers, the Fisheries Advisory Committee and the Role of Fishers and Post Harvest Technologies for Fishers and Fisheries Co-Management.

WBS 536: Monitoring

The Sociologist will make monitoring visits to Suriname over the life of the Sub-project to assess progress of activities being implemented, and to provide technical assistance and advise to the Fisheries Department. Information will also be gathered on issues to be included in subjects for the Second Fisheries Field Officers Training Workshop.

NAME	PROGRAM	INSTITUTION	ESTIMATE (US\$)
Post-graduate	1 Year Program in Fish Quality Control	Wageningen University, The Netherlands	250,000
Post-graduate	2nd Year Training course in Fisheries Management	Wageningen University, The Netherlands	250,000
Post-graduate	1st Year Training course in Fisheries Management	Wageningen University, The Netherlands	250,000
Post-graduate	1st Year Training course in Fisheries Management	Wageningen University, The Netherlands	250,000
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WBS 550. SURVEILLANCE AND ENFORCEMENT

Surveillance and enforcement need to be improved in the CARIFORUM region to successfully manage the fisheries. The purpose of this activity is to promote regional co-ordination of surveillance and policing of marine fisheries resource. To better understand the problems and needs of the countries regarding surveillance and enforcement and develop a co-ordinated regional approach, a consultant will be engaged to study the issues and develop proposals to resolve the problems. This is a regional initiative which will benefit all the CARIFORUM Countries. Suriname will participate in the study, including the development of the project proposal. Resources will be provided to support the participation of Suriname in the regional workshop.

WBS 560: POST-HARVEST HANDLING PROCESSING AND MARKETING

In order to optimise the returns from the fish captured significant improvement is needed in post-harvest handling, processing and marketing of fish in the CARIFORUM region. To better understand the problems and needs of CARIFORUM countries regarding post-harvest handling, processing and quality control these needs will be studied by a consultant and a report prepared. The report will define a strategy and a project proposal for enhancing regional institutional capability to meet these requirements. Possible areas for examination would be quality control, upgrading legislation, strengthening of inspectorate, marketing intelligence and value added processing. The Consultant's report will be discussed by the CARIFORUM Countries at a regional workshop. The Consultant will revise the report and project proposal in light of the discussion and conclusions of the workshop. The proposal will then be submitted to a donor for funding.

This is a regional initiative which will benefit all the CARIFORUM Countries. Suriname will participate in the study, including the development of the project proposal. Resources will be provided to support the participation of Suriname in the regional workshop.

WBS 570. FISHERIES DEVELOPMENT PLANNING

WBS 570.1: Study of Policy Options for Diversification of the Fisheries Sector

The fishing industry and the processing plants in Suriname and Guyana are focused on harvesting, processing and marketing of crustaceans and to a much lesser extent on the large and small demersal fin-fish species available in their waters. The traditional prawn fisheries are either over-exploited or fully exploited with very little room for further expansion. There is therefore a need to diversify and refocus attention on the under-utilized species of fin-fish including the demersal and pelagic species, particularly the coastal pelagic species. The process of diversification is already taking place in the fisheries. Some fishers are beginning to capture and market for various species of fin-fish. In order to ensure orderly and sustainable development and management of these fisheries, there is need for a socio-economic study focused on the development of these fisheries, particularly the post harvest aspects, including processing requirements, products and marketing opportunities. The study would propose policy options for diversification into these fisheries while ensuring their development in a sustainable manner. This study could be undertaken as a thesis for a student pursuing an advanced degree in fisheries or a consultant. The students would be supervised by the university with support and co-ordination provided by CFU staff. The output of this study will be recommendations for diversification of the fisheries sector into under-utilized fin-fish species. The recommendations will address the harvesting technology, processing, product development, marketing and sustainable management of the resources.

WBS 570.2 Technological/developmental – Community Based Pilot Project

The studies done to date on the fisheries indicate that there are tremendous opportunities for development of pelagic fisheries in Suriname. The estimated potential yields for large pelagic was 10,000 t and for coastal pelagic it was 200,000 t. The project could facilitate the development of a sustainable community based feasibility fisheries development study focused on exploratory and experimental fishing for both large and coastal pelagic species. The study should also consider the processing and marketing arrangements for the fishes caught. A small coastal community where there are pressing socio-economic needs and other conditions that are favourable for success of the project could be chosen. The community involvement subproject could target the same community to build the local

utilized fin-fish species. The recommendations will address the harvesting technology, processing, product development, marketing and sustainable management of the resources.

WBS 570.2 Technological/developmental – Community Based Pilot Project

The studies done to date on the fisheries indicate that there are tremendous opportunities for development of pelagic fisheries in Suriname. The estimated potential yields for large pelagic was 10,000 t and for coastal pelagic it was 200,000 t. The project could facilitate the development of a sustainable community based feasibility fisheries development study focused on exploratory and experimental fishing for both large and coastal pelagic species. The study should also consider the processing and marketing arrangements for the fishes caught. A small coastal community where there are pressing socio-economic needs and other conditions that are favourable for success of the project could be chosen. The community involvement subproject could target the same community to build the local fisherfolk organization that would execute the project. The major equipment needed are 2 small fishing boats, fishing gear (nets and hook and lines), fuel, personnel, Fish Aggregating Devices (FADs). Arrangements for storage and marketing would also need to be made. Initially it may be possible to use the existing processing facilities in Paramaribo to handle the catch produced under the pilot project.

The above program of work has been agreed upon this twenty first day of July 2000, by the Fisheries Department of Suriname and the CARICOM Fisheries Unit headquartered in Belize, in witness whereof the Parties hereby affix their signatures as follows:

For the CARICOM Fisheries Unit:

Mr. Hugh Saul
Project Manager

Mr. Milton Haughton
Scientific Director

For the Fisheries Department, Suriname:

Drs. Rene Lieveld
Director of Fisheries

Mrs. Yolanda Babb-Echteld
Fisheries Officer

Ms. Thania Chin-A-Lin
Fisheries Officer