



**CARICOM FISHERIES UNIT  
BELIZE**

**Strategic Review for Upgrading the Organizational and  
Institutional Arrangements and Capabilities of the Fisheries  
Department in Suriname**

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## ACRONYMS AND ABBREVIATIONS

ACP	African, Caribbean and Pacific States (associated to European Union)
BDC	Biological Data Collection
CANARI	Caribbean Natural Resource Institute
CARISEC	CARICOM Secretariat
CEVIHAS	Centre for Fisheries Harbours in Suriname
CFO	Chief Fisheries Officer
CFRAMP	CARICOM Fisheries Resource Assessment and Management Program
CFTDI	Caribbean Fisheries Training and Development Institute
CFU	CARICOM Fisheries Unit
CIDA	Canadian International Development Agency
CRFM	Caribbean Regional Fisheries Mechanism
DM	Data Manager
DOF	Department of Fisheries
DRAO	Deputy Regional Authorising Officer
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
MAS	Maritime Authority of Suriname
MCS	Monitoring, Control and Surveillance
MTI	Maritime Training Institute
NFW	National Fisheries Workshops
NGO	Non-Governmental Organisation
NIMOS	National Institute for Environment and Development of Suriname
NMFS	National Marine Fisheries Service (U.S.A.)
NRMU	Natural Resources 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
T & T	Trinidad and Tobago
TA	Technical Assistance
TC	Technical Committee
TCDC	Technical Co-operation between Developing Countries
TIP	Trip Interview Program (Data collection software package)
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
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
WP	Work Programme (Work Plan/Cost Estimate/Financial Plan)

## **EXECUTIVE SUMMARY**

The Integrated Caribbean Regional Agriculture and Fisheries Development Programme – Fisheries Component (ICRAFDP) is funded by the EU and implemented by the Caricom Fisheries Unit (CFU) in Belize. The Fisheries Component of ICRAFDP is aimed at strengthening fisheries planning and management capacity of national fisheries departments in CARICOM countries and to enhance the effective participation and support of fisher's communities in the planning and management process of the fishing industries for the sustainable use of the coastal and marine resources.

For Suriname, a Five to Six Year Work Programme funded by the Commission of the European Union under the Lomé IV through the ICRAFDP was prepared by the Fisheries Department of Suriname in collaboration with the CFU. The plan seeks to address some of the critical issues affecting the fisheries sector in Suriname by focusing on:

- Development of clear and adequate planning and policy framework
- Improving the fisheries database, information management systems and flow of information to stakeholders for planning and management systems
- Strengthening human and institutional capacities for resource management and conservation
- Empowerment of resource users so that they can assume greater responsibility for sustainable resource management

Technical Assistance to be rendered to the Fisheries Department was included in the agreed programme of work.

R & P Consultants were contracted to undertake a review and prepare recommendations for strengthening of the organisational and institutional arrangements of the Fisheries Department of Suriname 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 consultants undertook a field visit to Suriname in order to obtain information from key actors within the Ministry of Agriculture, Animal Husbandry and Fisheries, the Fisheries Department and Fisheries Sector, and reviewed several resource document that were provided by Suriname and the CFU.

Summarised below are the consultants' recommendations for a plan of action to build and strengthen the capacity of Suriname's Fisheries Department and to create the organisation and institutional capability necessary to effectively and efficiently discharge the mandate, functions and responsibilities in accordance with the Government policy directives, the evolving needs of the fishing and aquaculture sector , technological advances particularly in information system and the new challenges, and opportunities presented by the changing global fisheries regime.

## **SUMMARY OF RECOMMENDATIONS**

### **International and Regional Factors**

It is recommended that:

- (i) the Fisheries Department examines the Code of Conduct for Responsible Fishing and share information on it with other fisheries stakeholders in order to build their capacity for informed participation in all aspects of fisheries. Specifically, this should be done through a series of workshops and communications materials developed under extension, training and community development initiatives;
- (ii) the UN Fish Stocks Agreement be taken into account in training, staffing and fisheries legislation. Annex I is appended at **Appendix 3** to illustrate relevant considerations for the research and information systems;
- (iii) the Compliance Agreement be thoroughly evaluated for its relevance to fisheries management in Suriname before being used to determine capacity-building needs;

- (iv) Suriname continues to play an active role in establishing the CRFM as a medium to long-term strategy for strengthening its capacity both directly and through the linkages afforded by the Mechanism;
- (v) the Fisheries Department maintains close links with WECAFC and its subsidiary bodies as a means of building capacity, especially in relation to shared stocks and conducting collaborative research;
- (vi) the Fisheries Department accords bilateral and multilateral fishing agreements similar status to national law in terms of ensuring that national obligations can be met through adequate national capacity. WBS 512.2 of the Five-years Work Plan speaks directly to a Suriname/Guyana bi-national fisheries committee that should inform the appropriate national capacity; and
- (vii) Surinamese authorities develop a plan for capacity building based on the identified needs of Suriname in order to avoid unplanned interventions by NGO's based on the agendas and objectives of external organisations whose interest may not be consistent with national priorities. While this initiative must be broader than the fisheries sector, we **recommend** that the Fisheries Department spearhead this action in respect of living aquatic resources, and in so doing gather the support and linkages it needs for capacity building.

### **National Issues**

It is recommended that:

- (viii) new and revised fisheries legislation take into account what exists elsewhere in the CARICOM Community in order to facilitate collaboration in legal assistance and legal harmonization for fisheries management;
- (ix) although authorities did not indicate whether the 1978 Law on the Extension of the Territorial Sea and establishment of an economic zone was being reviewed or revised, this should be done in conjunction with the other fisheries legislation and the recent International Agreements pursuant to UNCLOS identified above. This will ensure that the capacity for Suriname to manage its marine jurisdiction is comprehensively covered;



- (x) all efforts be made to fully operationalise the 1993 Draft Fisheries Bill upon which further discussion of capacity building in Suriname is based. It shapes plans for several aspects of institutional reform such as the establishment of an Institute for Fish Quality. The Ministry of Health's Bureau of Public Health, which previously dealt mainly with imported canned fish, is proposing a comprehensive new food law that may be relevant to institutional relationships in the post-harvest sector;
- (xi) the draft Aquaculture Act and Fish Certification Law be used as the basis for building capacity in the sector, with legislation and agencies concerning land tenure, land use and planning, environmental and water laws, corporation registration and taxes, and trade duties also being considered;
- (xii) the Fisheries Department ensures that fisheries interests are included, or at least not prejudiced, in the environmental Act being developed by NIMOS and that the management of living aquatic resources be promoted in the national environmental arena;
- (xiii) the draft Fisheries Management Plan be used as the basis for assessing and building capacity until superseded;
- (xiv) over time, the Fisheries Management Plan be made more comprehensive to include additional information on policy, legal, institutional, social and economic issues that affect fisheries in order to get a fuller picture of what capacity is really required for fisheries management;
- (xv) there be a review of fisheries-related bodies, such as MRS, STINASU, NCD and an attempt made to rationalise their involvement in fisheries management through the Fisheries Advisory Committee proposed under the draft fisheries legislation; and

- (xvi) the Fisheries Department seeks representation on very critical bodies such as the CITES Scientific and Management Authorities that are under other agencies but relevant to the Fisheries Management Plan. The above are crucial aspects of capacity building through networking that may reduce the need for in-house capacity.

### **Fisheries Department**

It is recommended that:

- (xvii) the critical role of policy and planning be assigned to the Director in order to emphasise the importance of these functions in the multi-agency governance system that characterises Suriname. This would highlight the capacity needed for policy advice, planning and coordination within the Fisheries Department;

- (xviii) in order to build capacity and extend networks, most senior members of the Fisheries Department be responsible for liaisons and sitting on the boards of the various fisheries-related bodies pertinent to their own duties and that equal attention be paid to the public sector agencies relevant to fisheries and aquaculture management.

Consequently, the Fisheries Department should be represented on the MUMA advisory bodies as a means of enhancing its capacity to bring fisheries policies and plans to bear on the large coastal and riverine areas to be under MUMA jurisdictions;

- (xix) the FAC be constitute to have the capacity for oversight over all areas of fisheries authority responsibility, including those that have their own advisory bodies.

Including representatives of those other bodies can be one way to do this. It is insufficient to have only the Director as the representative in common;

- (xx) the pattern of internal planning through regular senior staff meetings and Quarterly Work Plans be sustained and that the planning system be integrally linked to the performance appraisal and compensation systems;

- (xxi) that the activities in the Five-Years Work Programme proceed as planned, but with considerable emphasis on adequate and effective counterparting of consultants and

practical in-country workshops. Most of the activities to be undertaken are already performed at low or occasional levels, and the real need is for refresher exposure in both stock assessment and data management areas;

- (xxii) as a matter of urgency, Ms Babb-Echteld be encouraged and facilitated to receive appropriate academic training and qualifications to complement her considerable practical expertise;
- (xxiii) while we agree with the need for additional computing hardware and software, this must be carefully analysed since there are already several computers in use and, therefore, emphasis should be placed on upgrading or supplying computing capability specific to the tasks to be performed. A generic approach is ill-advised;
- (xxiv) given the several streams of specialisation within the Fisheries Department, that a specialist in organizational development/human resource development familiar with the public sector in Suriname be assigned the task of formulating Career Development Path (CDP) for each stream up to the Director with appropriate qualification bars and develop a training plan through a training needs assessment. Further, to elaborate on Job Descriptions inclusive of the assignment of responsibilities to staff for the development and maintenance of intra and inter agency linkages;
- (xxv) because capacity may remain limited for some time, that considerable attention be paid to alternative approaches that do not rely heavily on data-intensive stock assessment as the sole basis for management;
- (xxvi) that the Suriname/Guyana bi-national fisheries committee explore options for shared research vessel operations in addition to some cooperation in the observer programme;
- (xxvii) given the practice of recruiting observers from among a pool of experienced fishermen, the approach should be to identify and sensitise suitable candidates through community development activities, and train a larger number than what is to be immediately hired in a series of short specialized sessions;

- (xxviii) as a result of contacts suggesting that MAS inspectors must be better trained that additional training be provided for MAS inspectors in support of their fisheries-related duties. (This falls outside of the scope of this project, but will be essential in relation to fisheries extension initiatives);
- (xxix) that the MAS be included in sensitisation on the Code of Conduct for Responsible Fisheries and be encouraged to work closely with Fisheries Department's extension agents on vessel safety, especially at the community centres;
- (xxx) in keeping with the Code, that the licensing and registration system to be enhanced to (WBS 320.2) take into account the vessel records maintained by MAS. This would be especially useful in detecting or verifying areas of vessel outfitting that require attention from the extension service;
- (xxxii) the information required by the FAO Compliance Agreement (**see Appendix 6**) be a guide for the State documentation of the larger local vessels in the industrial fleet and all foreign vessels regardless of whether Suriname becomes party to the Agreement;
- (xxxiii) in order to build appropriate enforcement capacity for offshore operations, that the organisers of the such courses in enforcement techniques take into account the provisions in the UN Fish Stocks Agreement and that this type of training networking continue, but that the Fisheries Department considers enforcement a role mainly for the specialised agencies while using data collectors and observers to obtain relevant information for prosecutions;
- (xxxiv) that the Fish Quality and Inspection Institute be formed through an internal project unit to take over the technical tasks now done by the Fisheries Department , especially regarding all matters related to plant and product certification. This will leave the Fisheries Department with a small core staff of perhaps two persons focused on oversight and support, given the legislative responsibility that will remain;
- (xxxv) that the strategy for community development be re-assessed. Rather than focus initially on the establishment of formal organisations, it may be more effective and

efficient to first develop income-generating small projects and encourage informal small group implementation involving a range of fisheries stakeholders;

(xxxv) if emphasis is to be on small community projects then the skills mix would change more towards micro-business development and implementation than communication for the initial phase and that the skills mix should be reviewed prior to implementation of WBS533;

(xxxvi) a two year appointment of a project development and management specialist, preferably from within Suriname, to work with the Fisheries Department on its approach to projects. Specifically the person would evaluate past performance of projects, identify ways to improve performance, develop an integrated suite of projects consistent with the fisheries management and development plans for local, regional and international interests to consider, and transfer skills to a Department counterpart;

(xxxvii) one of the ICRAFDP tasks be to conduct a more thorough review of the training and extension arrangements that are possible by local networking;

(xxxviii) the Fisheries Management Plan sets out the training and extension required in support of the various fleet and fishery initiatives with adequate attention to human dimensions such as alternative livelihoods where fleet capacity management takes the form of effort reduction and alternative fisheries are not options in given locations;

(xxxix) regardless of the organisational structure of the three major community development centres, that they incorporate on location some capacity for training and extension, especially if they are to serve as the main points of interaction with the fishermen and as the formalisation of fishermen's groups proceeds;

(xl) the Aquaculture Institute be set up as a matter of urgency, starting as a project under the Fisheries Department. The initiative is too significant to be accommodated by capacity building within the Fisheries Department. For this project to be effectively executed we **recommend** that the Aquaculture Act comes into force as soon as possible, paving the way for the National Aquaculture Committee of

government representatives to ensure that regulatory coordination is facilitated. The previous aquaculture board apparently ceased to function because government members wanted to focus on policy issues while private sector focused on immediate gains and getting assistance from government to improve profitability. Because of this experience we **recommend** that a separate social partnership steering committee be formed to guide the establishment of the Institute. This partnership will provide the Fisheries Department with technical expertise that is now more readily available in the private sector. Educational and training institutions should also be involved from the outset to address the human resource issues noted above;

- (xli) the Faculty of Technology of the University of Suriname offers an undergraduate course in Aquaculture and Fisheries, but the aquaculture components are inadequate for industry needs. We **recommend** that urgent attention be paid to improving the course content;
- (xlii) regarding the capacity to embark on the Aquaculture Institute project and the Institute's proposed structure, the team **recommends** that aquaculture officers receive training in database management, statistical analysis and interpretation along with their fisheries colleagues in order to prepare them for assembling the baseline information for the project. No further capacity building in this section will be necessary unless the project fails to materialise in the near future. Should this be the case, then recruiting and training a person in each of the four technical areas set out for the Institute would strengthen the aquaculture section;
- (xliii) In order to undertake the programme of work envisaged by the Fisheries Department, inclusive of the EU: ICRAFDP Five Years Work Programme, it is recommended that nineteen personnel be recruited.

In general, the team found the present organisational structure to be adequate for the Fisheries Department to efficiently execute its mandate. There is a strong need for skills development and initiatives to reduce the manpower shortage. These initiatives must involve creative ways to compensate staff commensurate with performance and in a way which encourages the attraction and retention of trained manpower.

## **Introduction**

Suriname is situated between 2-6 degrees N latitude and 54-58 degrees W longitude, on the Northern coast of South America. It is bordered by Guyana, Brazil and French Guyana. The total land area is 164,000 km<sup>2</sup> with about 85% of the country covered by rainforest.

The population is 405,000 inhabitants, half of whom live in Paramaribo, the capital, and another 100,000 in semi-urban areas close to Paramaribo. About 15% live in the southern interior forest, about 80% of the country's total land area.

In 1975 the country gained independence from the Netherlands. In 1985 Suriname accessed the CARIBBEAN COMMUNITY and from January 10<sup>th</sup>, 1986 the country became a full member of the CARIBBEAN COMMON MARKET (CARICOM).

The economy consists of important primary and secondary activities in mining and agriculture. Traditionally, bauxite and alumina contribute over 70% to the country's export earnings, the remaining comes from rice, bananas, fish, shrimp and vegetables. In recent years gold mining, again after 50 years became an important economic activity. Gold production in 1995 was estimated to range between 10,000 to 15,000 kg, ranking gold production no. 1 in terms of domestic value added and exports.

In 1982 the Government started the implementation of a structural program (SAP) to reverse negative economic trends. The SAP comprises monetary, budgetary, economic and social paragraphs. In 1985 positive economic effects of the implementation of the SAP started to show, but at the same time social costs have been extremely high. A social safety net was put in place to absorb part of the negative social effects resulting from the SAP.

The agricultural sector consist of approximately 10,000 smallholders, most of them living in the coastal areas using modern production techniques and strong market oriented production, while amongst the Interior population (about 15% of the total population, and consisting of Amerindians and Bush Negroes) crop farming is mainly for subsistence and carried out by women.

The most important national agricultural products are rice, bananas, vegetables, fruit, milk, meat, shrimps and fish.

There are a number of large estates in private ownership in rice and dairy cattle while the Government controls important large estates in rice and bananas and shrimps and fish. The contribution of the agricultural sector to GDP in real terms at factor prices is about 10%.

Sustainable exploitation and management of fishing waters (marine and other aquatic waters, sea waters), are promoted by the Government. Authorities should be empowered to monitor catches and provide protection against over-fishing and piracy. To this end, draft Fisheries Legislation has been prepared.

The Government realizes and is committed to the strengthening of the management capacities of the Fisheries Sector, in order to increase production of the fishery resource. The Fisheries Resource Management approach adopted through the EU funded ICRAFD programme complements Government's policy on Fisheries, and consists 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 mechanism for planning and decision-making;
- The establishment and strengthening of the Regional Fisheries Mechanism which is expected to continue to provide support for the regional fisheries initiatives.

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.



## **INTEGRATED CARIBBEAN REGIONAL AGRICULTURE AND FISHERIES DEVELOPMENT PROGRAMME**

Within the EDF-funded Integrated Caribbean Regional Agriculture and Fisheries Development Programme (ICRAFDP) 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 resources in CARIFORUM countries through sustainable harvesting and post-harvest use. Fishery management to achieve this objective should be enhanced by strengthening the capacity of national Fisheries Departments and regional institutions that are responsible for formulation of fishery management policy and implementation. The CARICOM Fisheries Unit (CFU), located in Belize, Central America, is executing this project.

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 controlled access system with clearly defined and equitable rights 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
- lack of public awareness of fisheries conservation and management issues and consequential lack of support for interventions designed to protect fisheries.

## WORK PLAN FOR SURINAME

Sustainable fisheries development and management in Suriname will be enhanced by technical assistance to the Fisheries Department and other national and local organizations associated within the fisheries sector. This will be accomplished through the following sub-programmes;

- Strengthening National and Regional Fishery Management Policy and Planning capability;
- Establishing and formalising Advisory/Decision-Making mechanisms at the national level;
- Establishing or enhancing fisheries data collection and management systems;
- Establishing or enhancing licensing and registration systems for fishermen and fishing vessels;
- Establishing mechanisms for participation of fishers and fishing industries in fishery management;
- Enhancing public awareness of fisheries management issues;
- Enhancing linkages and cooperation between Government fisheries officials and stakeholders in Suriname and Guyana;
- Strengthening human resource capability through training;
- Assessing the status and potential of critical resources; and
- Conducting research to generate information for policy formulation.

The main thrust of the programme will be undertaken through implementation of the following specific activities:

- Formulation of a Draft National Fishery Management Policy and Plan;
- Strengthening of the catch, effort and biological data collection systems for major fishery resources;
- Assistance and training in data analysis and interpretation;
- Design and support implementation of systems for licensing, registration and monitoring of fishermen and fishing vessels;
- Design and support implementation of programs to enhance the involvement of fishers in fisheries planning and management;

- Provide support for public education and awareness building programs;
- Long and short-term training for staff of the fisheries departments;
- Research to generate information for planning and policy formulation;
- Establishment of mechanism for closer co-operation between stakeholders in the fisheries sector in Suriname and Guyana;
- Establishment of mechanism for conflict resolution and conflict management between stakeholders in the fisheries sectors of Suriname and Guyana;
- Provide support for improvement in monitoring, control and surveillance; and
- Provide support for improvement in post-harvest handling and marketing of fish.

## **ABOUT THIS STUDY**

This study is an activity of WBS 500 *Fisheries Resource Management* in the Five Years Work Programme, outlined above, under which project activities are planned, implemented, monitored, and assessed, and funds and technical assistance provided to Suriname.

Specifically, this activity is WBS 512.1: *Strategic Review and Upgrading the Organizational Structure and Capability of the Fisheries Department*.

The purpose of this study 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. The Department must be empowered, equipped, organized and staffed to undertake the complex tasks associated with these responsibilities. While the focus is upon the Fisheries Department, other fisheries-related agencies are included in relation to their linkages.

The report was compiled on the basis of document analysis, and a visit to Paramaribo, Suriname by two members of the study team from 15-17 August 2000 for discussions with fisheries-related contacts. The terms of reference and study team are in **Appendix 1**, with the key fisheries-related contacts listed in **Appendix 2**. This report should be of interest to the Fisheries Department, other government departments, resource users, NGOs, academic and

research organizations, and other fisheries stakeholders. The international donor community and technical assistance providers may also find it useful.

The situation in Suriname is described under international, regional, national and fisheries authority scales with recommendations made throughout. These recommendations are then summarised in a general strategy using a framework of capacity-building dimensions. Because the Suriname work plan envisages detailed investigation in several areas covered by this study, many of the recommendations leave room for further refinement. Note also that the circumstances determining capacity requirements and the processes of capacity building are dynamic. Although the recommendations are intended to serve the Five Years Work Programme, changes in circumstances may dictate modifications during this period.

## **International and Regional Factors**

This section examines some international and regional factors that influence the fisheries environment in Suriname. Emphasis is on fisheries instruments and organisations, but with appreciation that the influences of globalisation and economic, political and other external factors are not trivial.

### **CODE OF CONDUCT FOR RESPONSIBLE FISHERIES**

The *Code of Conduct for Responsible Fisheries* sets out principles and international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem, biodiversity, and the nutritional, economic, social, environmental and cultural importance of fisheries and the interests of all those concerned with the fishery sector. States and all those involved in fisheries have been encouraged to apply the Code and give effect to it. Some States have formally incorporated the Code into national legislation, policy or administrative practice. The Compliance Agreement (see below) is an integral component of the Code. The Code also forms the basis of the guiding principles of the Caribbean Regional Fisheries Mechanism (CRFM) (see below).

The Fisheries Department is aware of the Code of Conduct for Responsible Fisheries, but its application in Suriname has not yet been examined closely. The fishing industry is probably

unaware of the Code. It is **recommended** that the Fisheries Department examine the Code and share information on it with other fisheries stakeholders in order to build their capacity for informed participation in all aspects of fisheries. Specifically we **recommend** that this should be through a series of workshops and communications materials developed under extension, training and community development initiatives.

#### **UN FISH STOCKS AGREEMENT**

*The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks* (called the UN Fish Stocks Agreement in fisheries circles or UN Implementation Agreement in legal circles) opened for signature in 1995. It is one of the key international legal instruments shaping the global fisheries regime even before it comes into force. Its stated objective, in Article 2, “is to ensure the long term conservation and sustainable use of straddling fish stocks and highly migratory fish stocks through effective implementation of the relevant provisions of the Convention”.

The Fisheries Department in Suriname is currently examining the implications of this Agreement. Their initial perspective is that the obligations and responsibilities of the Agreement are onerous. In respect of capacity, there are major concerns monitoring, control and surveillance (MCS), and the “Standard requirements for the collection and sharing of data” set out in Annex I of the Agreement. Since this Agreement is likely to come into force within the next few years, and the provisions in Annex I are relevant to good fisheries management generally, it is **recommended** that the UN Fish Stocks Agreement be taken into account in training, staffing and fisheries legislation. Annex I is appended to illustrate relevant considerations for the research and information systems. Details are returned to later when specifically addressing the Fisheries Department.

#### **FAO COMPLIANCE AGREEMENT**

*The Agreement to Promote Compliance with International Conservation Measures by Fishing Vessels on the High Seas* was opened for signature in 1993. This Agreement causes

parties to maintain a record of vessels under their flags that are authorized to undertake high seas fishing, and to ensure that these vessels fish responsibly. To a large extent the Compliance Agreement is overshadowed by the Code of Conduct for Responsible Fisheries into which it is integrated and by the UN Fish Stocks Agreement, which is of greater interest to most coastal States. Since Suriname flags industrial fishing vessels, several operated by foreign interests, the Compliance Agreement is relevant to its flag state responsibility.

The Fisheries Department in Suriname is currently examining the implications of the FAO Compliance Agreement. Their initial perspective is that the obligations and responsibilities of the Agreement are not onerous when compared to the UN Fish Stocks Agreement. However, there is no strategy yet in place to systematically determine the advantages and disadvantages of becoming party to this agreement. It is **recommended** that the compliance Agreement be thoroughly evaluated for its relevance to fisheries management in Suriname before being used to determine capacity-building needs. However, if vessel registration and information systems are strengthened, it is likely that most of the needs of this Agreement can be met. An extract from Article VI – Exchange of Information is appended (Appendix 4) to illustrate what is **recommended** for licensing and registration, especially for foreign flagged vessels and larger vessels in the domestic fleet that can range onto the high seas.

#### **CARIBBEAN REGIONAL FISHERIES MECHANISM (CRFM)**

The Caribbean Regional Fisheries Mechanism (CRFM) is being developed as the permanent CARICOM institutional successor to CFRAMP. The CRFM is at the core of a network of regional and international fisheries stakeholders. Article IX: Agricultural Policy of Protocol V amending the Treaty establishing the Caribbean Community has heavily influenced the design of this body. Its goal is to promote sustainable use of fisheries and aquaculture resources in and among Member States, by the development, management and conservation of these resources in collaboration with stakeholders to benefit the people of the Caribbean region. There will be three main organs of the CRFM:

- A Ministerial body that will be the ultimate decision making organ of the CRFM;
- A Forum including national fisheries authorities, that will provide direction to the CRFM;
- A coordinating technical fisheries unit that will be responsible for implementation.

Suriname participates in regional meetings held to design and implement the CRFM by September 2001, and should be represented on the first two bodies above that will address the six initial priority areas below:

- Assessment and management of shared resources
- Assessment and management of fisheries resources at the national level
- Regional and national capacity-building and institutional strengthening
- Regional and National Project Development and Management
- Regional representation in international fora
- Regional and national socio-economics and planning

It is **recommended** that Suriname continues to play an active role in establishing the CRFM as a medium to long-term strategy for strengthening its capacity both directly and through the linkages afforded by the Mechanism.

#### **WESTERN CENTRAL ATLANTIC FISHERIES COMMISSION (WECAFC)**

The Western Central Atlantic Fishery Commission (WECAFC) was established in 1973 by resolution of the FAO Council under Article VI-1 of the FAO Constitution to be a regional fisheries body for the Western Central Atlantic Ocean. The objectives of WECAFC are to facilitate the coordination of research; to encourage education and training; to assist Member Governments in establishing rational policies; and to promote the rational management of resources of interest to two or more countries. At its Ninth Session in 1999 WECAFC members, including Suriname, agreed to keep it as an advisory rather than management body.

Suriname participates in WECAFC's multiparty working groups on shrimp and groundfish along the Guiana-Brazil Shelf, and has offered to host the next meeting of the Commission in 2001. At its Ninth Session the Commission considered the costs and benefits of cooperation and capacity building for responsible fisheries management and other issues of relevance to restructuring the Fisheries Department. It is **recommended** that the Fisheries Department maintains close links with WECAFC and its subsidiary bodies as a means of building

capacity, especially in relation to shared stocks and conducting collaborative research. WBS 421.6 of the Five Years Work Programme provides for this activity.

### **FISHING AGREEMENTS**

Suriname shares its fish stocks with neighbouring countries, and some level of agreement among these countries is necessary for effective management. Regarding foreign fishing, the study team was informed that there is a general Memorandum of Understanding (MOU) with Guyana, and an expired Agreement with Venezuela which is to be replaced by a newly negotiated, but not yet signed, Agreement. These documents were not available for examination in relation to the capacity of the fisheries-related government agencies in Suriname to discharge their duties under these instruments. However, the considerations are likely to be similar to those related to the previously mentioned international instruments, and national jurisdiction dealt with below. It is **recommended** that the Fisheries Department accords bilateral and multilateral fishing agreements similar status to national law in terms of ensuring that national obligations can be met through adequate national capacity. WBS 512.2 of the Five Years programme speaks directly to a Suriname/Guyana bi-national fisheries committee that should inform the appropriate national capacity.

### **GOVERNMENTAL AND NON-GOVERNMENTAL ORGANISATIONS**

Like most developing countries Suriname pursues and receives a fair share of attention from external governmental and non-governmental organisations (NGOs). Substantial assistance has been received by way of advisors and projects from the governments of Belgium and Japan, the FAO and EU to name a few. Authorities hoped that such assistance would continue in view of the current economic conditions and outlook. While organisations such as the World Wildlife Fund (WWF), Conservation International and others have shown interest in Suriname, authorities say that this has been largely confined to the terrestrial environment. As this is likely to change in the future, it is **recommended** that Surinamese authorities develop a plan for capacity building based on their identified needs in order to avoid unplanned interventions based on the agendas and objectives of external organisations where these are not consistent with national priorities. While this initiative must be broader than the fisheries sector, we **recommend** that the Fisheries Department spearheads this action in respect of living aquatic resources, and in so doing gathers the support and linkages needed for capacity building.



## **National Environment**

This section describes the national environment in which fisheries management (this term including both conservation and development) is undertaken in Suriname. Most attention is paid to legislation, the draft Fisheries Management Plan and linkages with other agencies. Since the fisheries sector is described in the draft Fisheries Management Plan and elsewhere in the ICRAFDP documentation, a sector overview is not provided here.

Also not described in detail is the economic situation in Suriname that has considerable influence on fisheries capacity, but is beyond the scope of this report. Suffice it to say that the economic challenges facing Suriname constrain capacity building from individual to institutional levels. Issues such as supplementary personal income, availability of human resources for and attitudes towards fisheries work, revenue generating and foreign exchange earning initiatives, and other similar matters must be taken seriously and factored into detailed plans for building capacity. These constraints will have much influence on the practical feasibility of plans and the achievement of stated objectives particularly if unrealistic assumptions are made about the climate for organisational and human resource development. WBS 512.4 of the Five Years Work Programme is a study of the impact of neo-liberalism on the fisheries sector. In this study it is **recommended** that adequate attention be paid to the public sector and the role of government.

### **PRESENT AND PROPOSED LEGISLATION**

Legislation is an expression of policy. It delineates the basic capacity that the Fisheries Department must have to carry out its mandate. Suriname's continental legal system was established by the Netherlands in 1869, and although it differs in style from the CARICOM and OECS harmonized fisheries legislation, the content can be similar if permitted by policy. Many laws are currently being revised or proposed to have the national legislation meet contemporary domestic and international requirements. It is **recommended** that new and revised legislation take into account what exists elsewhere in CARICOM in order to facilitate collaboration in legal assistance and legal harmonization for fisheries management.

The 1978 Law on the Extension of the Territorial Sea and the Establishment of an Economic Zone describes a 12 mile territorial sea and 200 mile economic zone. As with many

CARICOM States, this pre-dates the signing of UNCLOS in 1982 and its coming into force in 1994. Authorities did not indicate that this law was being reviewed or revised, but it is **recommended** that this be done in conjunction with the other fisheries legislation and the recent international Agreements pursuant to UNCLOS identified above. This will ensure that the capacity for Suriname to manage its marine jurisdiction is comprehensively covered.

The 1961 Fisheries Protection Act regulates fishing in estuaries and inland waters. It has been described as general, outdated and entirely inadequate for modern fisheries management. The 1980 decree C-14 on regulations for the sea fishery, also outdated, is the present operative legislation for managing coastal and industrial fisheries in Suriname. Several attempts have been made to combine and modernize the above two pieces of legislation. The 1993 Draft Fisheries Bill, done with FAO assistance and recommended by the Fisheries Department, is still with the legal authorities in Suriname but with no indication of when it may be finalised.

Main differences between present and new legislation include allowing more regulations and orders for flexibility; shifting the burden of proof to the alleged offender; more precise technical content; provision for a Fisheries Advisory Committee (FAC), and fisheries management strategic planning. It is **recommended** that all efforts be made to finalise and bring into force this legislation upon which further discussion of capacity building in Suriname is based. Given the time elapsed, once a commitment to conclude the process has been made, it may be necessary for the FAO to do a final review and revision. Other CARICOM States have requested similar exercises and Suriname may be able to benefit from these experiences.

Suriname has recent (16 November 2000) fish inspection legislation to address seafood quality assurance and control, especially to meet the strict requirements of its important export markets in the European Union. This legislation is essential for developing the post-harvest sector and earning foreign exchange. It is **recommended** that all efforts be made to fully operationalise this legislation upon which further discussion of capacity building in Suriname is based. It shapes plans for several aspects of institutional reform such as the establishment of an institute for fish quality. Ministry of Health's Bureau of Public Health, which previously dealt mainly with imported canned fish, is proposing a comprehensive new food law that may be relevant to institutional relationships in the postharvest sector.

Aquaculture legislation is also being formulated to support and regulate planned growth of this sector in special development areas as outlined in a national aquaculture policy. An Aquaculture Act and fish certification law have been drafted and accepted by the Fisheries Department pending further legal process. The proposed aquaculture and fish certification institutes are major institutional changes. It is **recommended** that this draft legislation be used as the basis for building capacity in the sector, with legislation and agencies concerning land tenure, land use and planning, environmental and water laws, corporation registration and taxes, and trade duties also being considered.

The National Environment and Development Institute of Suriname (NIMOS) is presently working on general framework environmental legislation with capacity building aspects, but fisheries interests are not intimately involved in this process. It is **recommended** that the Fisheries Department ensure that fisheries interests are included, or at least not prejudiced, in this process and that the management of living aquatic resources be promoted in the national environmental arena.

#### **DRAFT FISHERIES MANAGEMENT PLAN**

As noted earlier, the anticipated Fisheries Act makes provision for a Fisheries Management Plan (FMP). The Fisheries Department has been proactive in having a draft FMP formulated and subjected to stakeholder review through consultation processes that continue to the present. Although there has been no official confirmation, the Fisheries Department has been using the draft as an expression of harvest sector policy and a working document for its operations. It is **recommended** that the draft Fisheries Management Plan be used as the basis for assessing and building capacity, particularly related to catch and effort, until superseded.

The draft FMP reviews mainly the marine fisheries resources in Suriname under 16 management units comprising groups of species that are to be managed together. The main characteristics and status of knowledge and exploitation of each management unit is summarised under headings similar to those of the FMPs done for States participating in CFRAMP. Management objectives are discussed for each unit, and strategies to achieve them are identified along with current issues and priorities for further investigation. Finally, on a fleet and fishing gear basis, some of the management regulations that will be required are

discussed. Please refer to the draft FMP for details, noting that there must be adequate capacity to deal with each of the management units and measures agreed to under the plans.

It is **recommended** that, over time, the Fisheries Management Plan be made more comprehensive to include additional information on policy, legal, institutional, social and economic issues that affect fisheries in order to get a fuller picture of what capacity is really required for fisheries management.

#### **FISHERIES-RELATED AGENCIES AND INSTITUTIONS**

Some of the fisheries-related agencies and institutions in Suriname have been mentioned previously, and others such as the Maritime Authority of Suriname (MAS) and University of Suriname will be discussed in specific contexts below. As a general rule the fisheries authorities indicate that there have been no problems with interactions and linkages with other government agencies having fisheries-related functions (e.g. MAS) once the division of responsibility is clear in law. Concerning the delegation of authority and decentralisation through the formation of fisheries and aquaculture related institutes, no problematic areas of jurisdiction are expected, but the Fisheries Department wants to maintain legal responsibility even after sharing some power with foundations, institutes or other agencies.

The formation of numerous subsidiary bodies is common practice in the governance of Suriname across all areas of natural resource management. For example, STINASU has responsibility for sea turtle conservation, NCD has the management authority for CITES and other agreements. While contacts did not see the number of management bodies with overlapping jurisdictions as problematic, it is **recommended** that there be a review of such fisheries-related bodies, and an attempt made to rationalise their involvement in fisheries management through the Fisheries Advisory Committee proposed under the draft fisheries legislation. It is also **recommended** that the Fisheries Department seeks representation on very critical bodies such as the CITES Scientific and Management Authorities that are under other agencies but relevant to the Fisheries Management Plan. The above are crucial aspects of capacity building through networking that may reduce the need for in-house capacity.

## **Fisheries Department**

This part of the report evaluates each section of the Department in turn. The present overall organisational structure of the Fisheries Department is depicted in Figure 1 of **Appendix 3**. Because of the number of vacancies, and resultant doubling up of duties, the functional structure differs from that indicated by the organisational chart. Detailed below are significant changes in the structure of the Fisheries Department as two new Institutes (for fish quality and aquaculture) are proposed for establishment under legislation. This may require a transitional period in which project units operate within the Department in order to build the institutes before a final separation occurs (Figures 2 and 3 of **Appendix 3**). The result will be a fairly complex set of relationships among the various stakeholders and institutions involved in fisheries governance (Figure 4 of **Appendix 3**). Proceeding simultaneously with these changes is the ICRAFD programme. Comments on the ICRAFD Five-Years Work Programme in relation to the recommendations below are in **Appendix 4**.

### **POLICY AND PLANNING**

The Fisheries Division does not have a section or post specifically for policy and planning, but by practice these functions are primarily the responsibility of the Director through various avenues. Operationalisation of the Fisheries Department's mission statement will be through implementation of the FMP when approved. It is **recommended** that the critical role of policy and planning be specifically assigned to the Director in order to emphasise the importance of these functions in the multi-agency governance system that characterises Suriname. This would highlight the capacity needed for policy advice, planning and coordination within the Fisheries Department.

Of particular interest in this regard is the Fisheries Advisory Committee (FAC) under the new Fisheries Act. At present, the planned composition of the FAC is: Director of Fisheries or his nominee; Ministry of Finance; Ministry of Trade and Industry; Ministry of Transport, Communications & Tourism; 3 persons from the fishing industry harvest sector; 1 fish processor from the post-harvest sector. Aquaculture will have a separate advisory body, as may fish quality and inspection through the institutes to be formed. We **recommend** that the FAC be constituted to have the capacity for oversight over all areas of fisheries authority responsibility, including those that have their own advisory bodies. Therefore we also **recommend** that the composition of the FAC be reviewed in this light. Including

representatives of those other bodies can be one way do this. It is also insufficient to have the Director as the only representative of the Fisheries Department on these several other bodies. We **recommend** that, in order to build capacity and extend networks, most senior members of the Fisheries Department be responsible for liaisons and sitting on the boards of the various fisheries-related bodies pertinent to their own duties.

Most of the estuarine zone of Suriname is proposed for multiple use management areas (MUMAs). Under a wetlands convention, down to the 6m isobath is proposed to be included in the multiple use management areas stretching along most of the coast. Also proposed are 400-500m wide specially protected forest areas along riverbanks and the estuarine zone that could affect fisheries management. An advisory committee will be formed to deal with the MUMAS, and the Director of Fisheries will be invited to attend. The whole MUMA system policy is to have bodies of stakeholders and local area management plans involving area residents.

Several of these initiatives have advisory bodies with emphasis on communication to avoid conflict. However, none of the existing laws provide for conflict resolution. One contact cited the case of a local management area where the nature reserve board included the Director of Fisheries and a turtle problem was solved at the local level without recourse to law. WBS 512.3 of the Five Years Work Programme concerns mechanisms for conflict resolution and management, but the intended focus is on the industry. We **recommend** that equal attention be paid to the public sector agencies relevant to fisheries and aquaculture management. The **recommendation** is also made for the Fisheries Department to be represented on these bodies as a means of enhancing its capacity to bring fisheries policies and plans to bear on the large coastal and riverine areas to be under MUMA jurisdictions.

Internal planning is presently achieved through regular senior staff meetings that are held about once per month and brief reports may be presented and discussed. However, all Section Heads have interaction with the Director several times per week during the normal course of duties. We **recommend** that this pattern of internal planning be sustained.

## **RESEARCH AND STATISTICS**

Although the Research and Fisheries Information System sections have separate section heads they are so closely and operationally related that they are addressed together here.

Contacts noted that while shrimp and some groundfish fisheries are declining, and in some cases new vessel licences are not being issued, exploitation of small pelagics, and perhaps

large pelagics, is thought to be an area of potential development. They recommended a biomass survey to quantitatively assess the potential of small pelagics. Industry clients also requested research to reveal results of suspected destructive fishing methods and declining water quality, and hence to advise on future licensing strategies. They see as priority scientific research to explain declining catches and to calculate the cost implications for the industry and fish plants in particular. Contacts also feel that the fishing industry should contribute to the cost of research aimed at fishery recovery and rehabilitation since it should ultimately reap the benefits. Most fisheries research is done by the Fisheries Department, not externally. There are few partnerships formed yet with institutions that may offer or develop research capability such as the university. According to fishing industry contacts, research results are best communicated to the industry face to face, and seldom in formal settings.

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 Fisheries Information 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 recognised as a human resource problem.

Lack of resources for the data collection program – manpower shortage, 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.

Fisheries research and information systems are major components of the ICRAFDP Five Years Work Programme of fisheries in Suriname through a series of activities under WBS 310 and 421 address fisheries management data systems and assessment respectively. With cooperation from Fisheries Department contacts the study team assessed the activities related



to capacity building already in the draft programme. No entirely new areas of capacity building were considered necessary. It is **recommended** that the activities in the Five Year Work Programme proceed as planned, but with considerable emphasis on adequate and effective counterparting of consultants and practical in-country workshops. Most of the activities to be undertaken are already performed at low or occasional levels, and the real need is for refresher exposure in both stock assessment and data management with emphasis on analysis and interpretation. While we agree with the need for additional computing hardware and software, we **recommend** that needs be carefully analysed since there are already several computers in use and emphasis should be placed on upgrading or supplying computing capability specific to the tasks to be performed. A generic approach is ill-advised.

We **recommend** that the provisions in Annex 1 of the UN Fish Stocks Agreement (see **Appendix 5**) be used as a guide to the level of capability required both for national data management and data sharing. This is regardless of whether Suriname becomes party to the Agreement or not. However, because capacity may remain limited for some time we also **recommend** that considerable attention be paid to alternative approaches that do not rely heavily on data-intensive stock assessment as the sole basis for management. The use of local knowledge, indices of abundance or availability trends and the like should be included in the specific programme activities and training. The compatibility of these approaches with the work of the Shrimp and Groundfish Working Group must be factored into this perspective.

We also **recommend** that, as a matter of urgency, Ms Babb-Echteld especially be encouraged and facilitated to receive appropriate academic training and qualifications to complement her considerable practical expertise. This will allow her to improve her performance and secure promotion to higher levels commensurate with her abilities, whereas her lack of academic qualifications is now a barrier to the preferred career development path (CDP). Given the several streams of specialisation within the Fisheries Department it is **recommended** that a specialist in human resource development familiar with the public sector in Suriname be assigned the task of formulating CDP for each stream up to Director with appropriate qualification bars and training plans in the process. This point is returned to later, and is critical given the scarcity of persons with tertiary level fisheries training in the labour market.

The observer programme requires special attention. We **recommend** that the present observers be upgraded through training that is also offered to 2-3 new observers hired under the ICRAFDP Five Years Work Programme. Given the practice of recruiting observers from among a pool of experienced fishermen, the **recommended** approach is to identify and sensitise suitable candidates through community development activities discussed later, and train a larger number than to be immediately hired via a series of short specialised sessions. This should build excess capacity for the observer programme directly, but also serve to inform a wider cross-section of the industry on the important roles of observers. CFRAMP material on observer programmes in Kulka (1997) and Kulka and Hurley (1997) is already available.

The Fisheries Department does not want to acquire a dedicated research vessel for exclusive use due to maintenance problems experienced in the past, but the department appreciates the need for access to vessels for regional assessments and to demonstrate gear, for example. It is **recommended** that the Suriname/Guyana bi-national fisheries committee explore options for shared research vessel operations in addition to some cooperation in the observer programme discussed above.

## **MANAGEMENT AND DEVELOPMENT**

### **Licence administration**

Closely connected to fishing licence administration is vessel registration undertaken by the Maritime Authority of Suriname (MAS), the main fisheries-related function of which is to issue an annual certificate of seaworthiness for all licensed fishing vessels after inspection. Wood and steel are the main vessel construction materials. The former vessels are local or from Guyana and the latter from anywhere including Korea, Japan and Europe. Most boats pass seaworthiness inspection. There are few boat losses due to poor construction, but owners tend to minimise maintenance to reduce costs. Few local small vessels are insured, as insurance is not obtainable due to perceived high risk. Large vessels tend to be foreign flagged and insured overseas.

MAS also occasionally checks at sea for vessel documentation and maintains a register of fishing vessels in the general categories: inland, coastal and seagoing. New applicants must

present prior authorisation that Fisheries Department will allow the vessel to be licensed to fish. The MAS has 7 inspectors based in Paramaribo who go anywhere to inspect vessels. No guidelines for vessel design exist, but inspectors use a standard inspection form and are aware of IMO guidelines for vessels. Private sector surveyors handle large vessels for international concerns and insurance. Contacts suggested that MAS inspectors must be better trained. We **recommend** additional training for MAS inspectors in support of their fisheries-related duties. This falls outside of the scope of this project, but will be essential in relation to fisheries extension initiatives. In particular a proposed FAO regional technical cooperation project on small fishing vessel inspection and construction could be of relevance. While Suriname is not included in this project, project materials and other outputs may be requested for review with the possibility of a local replicate activity taking place later.

The MAS is encouraging coastal fishing vessels to get radios, but training in their proper use is required. MAS is not yet concerned about fishing gear and the links between vessel design and fishing capacity since this is seen as Fisheries Department jurisdiction. However MAS inspectors have noted that gear interaction between trawlers and drift seines are prevalent. We **recommend** that the MAS be included in sensitisation on the Code of Conduct for Responsible Fisheries and be encouraged to work closely with Fisheries Department extension agents on vessel safety, especially at the community centres.

In keeping with the Code we also **recommend** that the licensing and registration system to be enhanced (WBS 320.2) take into account the vessel records maintained by MAS. This would be especially useful in detecting or verifying areas of vessel outfitting that require attention from the extension service. The information required by the FAO Compliance Agreement (see **Appendix 6**) is **recommended** as a guide for the State documentation of the larger local vessels in the industrial fleet and all foreign vessels regardless of whether Suriname becomes party to the Agreement.

Regarding enforcement, there are now 3 persons in Fisheries Department enforcement, one of whom is retiring soon. However the Police were scheduled to train 10 Fisheries Department personnel for 10 weeks from mid-October in enforcement techniques. In order to build appropriate capacity for offshore operations we **recommend** that the organisers of such courses take into account the provisions in the UN Fish Stocks Agreement. We **recommend** that this type of training networking continue, but that the Fisheries Department consider

enforcement a role mainly for the specialised agencies while using data collectors and observers to obtain relevant information for prosecutions.

### **Quality assurance and control**

Quality assurance and control is a prominent area under the Management and Development section, being relatively well staffed. It is an area that is receiving much attention due to the importance of seafood exports for foreign exchange earnings. Public Health has traditionally been responsible for water and product quality, but Fisheries is now taking on more of the latter. The fish plants visited had much praise for the Fisheries Department regarding assistance in training fish inspection personnel, assistance in plant design and fitting out, and assistance in keeping up to date with the EU regulations. Now fish plant personnel do most of the in-house training themselves, and can get regulatory information via the Internet. However, to build or re-engineer a fish plant to EU specifications still requires Fisheries Department input and assistance.

The Fisheries Department audits fish plants for compliance with HACCP, and is the competent authority for seafood exports to the EU. However, it proposes setting up an Institute for Fish Quality or Fish Inspection Institute to help respond better to market demand and take some of the responsibility for certifying both capture fishery and aquaculture products for export. A draft decree for the articles of association has already been prepared.

The Institute for Fish Quality would get revenue by charging fees for product certification, and be run by a mainly private sector board. At present there is only an informal system of payment for services. Fisheries officials also informed that the Ministry of Health intends to build a certified lab with PAHO assistance and to establish a food safety board and that these should strengthen the institutional structure for fish quality assurance through networking.

The proposed new fish inspection legislation covers matters such as inspection procedures and tax, guidelines for fishing vessels, specifications for landing sites and fish plants, trade regulations, marketing, labelling, additives, registration of premises, packaging and HACCP. The staff of the Fisheries Department is relatively well trained in all of these areas, but additional officers are required to cope with the demand for services from the fish plants. In all, a requirement for seven additional technical staff was determined, but much depends on the timetable and plan for setting up the Fish Inspection Institute.

According to the private sector, there is no need for plants to have a say in how the Fisheries Department does its work through any kind of advisory committee. Processing, product development and export are not major problems, it is simply a matter of keeping up to date and hence globally competitive. The corporate post-harvest sector sees government as a facilitator and communication link, not a source of finance, but is looking forward to an Investment Act to provide more incentives in order to promote further investment.

Among the few issues raised were:

- Problems of getting community landing sites and artisanal boats up to quality standards
- Fish plants are individualistic and competitive, and have no collective body for the Fisheries Department to work with more efficiently
- Requirement for credit due to exorbitant interest rates, and need for foreign exchange to support transactions, including financing shipments prior to payment
- Need more information on Caribbean markets, but it is not available from any agency
- Need for shrimp plant investment diversification due to declining catches.

It is **recommended** that the Fish Quality and Inspection Institute be formed through an internal project unit to take over the technical tasks done now by the Fisheries Department, especially regarding all matters related to plant and product certification. This will leave the Fisheries Department with a small core staff of perhaps two persons focused on oversight and support given the legislative responsibility that will remain. This new structure is shown in **Appendix 3**.

### **Project development, artisanal fisheries**

One of the most important fisheries development initiatives has been the construction of district fisheries community centres for Nickerie, Coppename and Commewijne. It was the intention of government to construct and then hand them over to cooperatives to run.

However, contacts say that this cannot work as the latter are not successful. There is no active equivalent to a Cooperatives Department in Suriname. None of the three community centres is operating properly, and fishermen participation is low. Contacts expressed a preference to privatise the community centres as limited liability operations with mainly private shareholding. Government would retain control of about 10% in order to have a director on the board. Government's director would ensure that the fisheries development focus is

maintained and to pass on government policy information to other board members. We were told that the government has already approved this transformation. Centre managers are now from the Fisheries Department, but need not be in the future.

Contacts saw the community centres supporting the work of government at little or no direct cost since they should be financially independent. Government cannot afford to subsidise the community centres, therefore fees for services offered by the centres would be market driven for full cost recovery or profit. The main function of a centre would hence be to make returns from selling fishing inputs. The sale transaction is also how the fishermen could communicate with government when they come to obtain fishing supplies.

Most contacts saw little merit in a fishermen's organisation development initiative since there is said to be insufficient motivation to maintain organisations. Fishermen (mostly Guyanese) were said to not be interested in forming them unless direct and immediate financial or other tangible benefits are apparent. The strong preference was to reach fishermen as individuals through the input supply system connected with landing site development.

Because the study team was unable to visit the community centres, assess the present arrangements and interact with the stakeholders directly, it is difficult to make detailed recommendations in respect of community and fisherfolk organisation development. From the information received from contacts we **recommend** that the strategy for community development be re-assessed. Rather than focus initially on the establishment of formal organisations, it may be more effective and efficient to first develop income-generating small projects and encourage informal small group implementation involving a range of fisheries stakeholders. Once these are working well perhaps they can be coalesced and formalised. This would be similar to a study group approach to cooperative formation, but would not be billed as such. Innovative options may have to be explored beyond what appears at present in the Five Years Work Programme.

The latter clearly sets out the intended capacity-building physical resources and personnel. The former seem appropriate for fieldwork flexibility, but the latter may require re-thinking. If emphasis is to be on small community projects then the skills mix would change more towards micro-business development and implementation than communication for the initial phase. We **recommend** that the skills mix be reviewed prior to implementation of WBS 533.

In general there seems to be a need for project formulation, implementation and monitoring capability on staff. Contacts informed that, in addition to the government's planners, the Department works with private planning consultants to develop projects for funding or to implement them alongside international firms. However, the search for projects to supplement in-house capability is a constant endeavour. For example the Fisheries Department is frequently seeking and receiving assistance from the FAO and other sources for various projects. The impression that these projects were, or are to be, coordinated into an integrated suite with a combined goal was not conveyed by contacts.

A haphazard approach to projects can drain, instead of supplement, resources for fisheries management and development. We **recommend** temporarily obtaining the services of a project development and management specialist, preferably from within Suriname, to work with the Fisheries Department on its approach to projects. Specifically the person would evaluate past performance of projects, identify ways to improve performance, develop an integrated suite of projects consistent with the fisheries management and development plans for local, regional and international interests to consider, and transfer skill to a Department counterpart. A stint of about two years duration should be sufficient. Following on the previous recommendations, this person would be instrumental in developing the micro-business projects for the landing site development centres.

In terms of developmental fisheries projects, there is only limited activity at present. The Centre for Fisheries Harbours in Suriname (CEVIHAS) is a current port operations project in Paramaribo via a government company of which the Director of Fisheries was the Chairman of the Board in August 2000. It focuses mainly on dry-docking and maintenance for vessels of up to 50 tons. Surrounding buildings are used for other purposes including a boat-building project. CEVIHAS operates a bonded warehouse for ship supplies as a revenue generating activity. While presently a government company, contacts informed that it might change to private shareholding as this is the general trend with government companies at present. There was no available documentation on this project, but it does not appear that activities to bring resource users and vessel investors into the initiative were fully taken advantage of from a capacity-building context. If this observation is correct, then we **recommend** that future such projects have capacity-building as a more prominent objective in addition to the physical outputs. This is related to the outlook on training and extension.

## **Training and extension**

The community development centres at present are not expected to train fishermen, especially if transformed into limited liability operations. Training was seen by contacts as a government responsibility, easily done by buying in services rather than permanently increasing the in-house capacity of the Fisheries Department once funds are available. No clear training strategy was provided to the study team since deliverables were closely linked to the activities of externally funded projects. Contacts expected to get 60-70% of the funds for training from local sources, and for the remainder to be obtained externally. Externally funded training has been provided in fish quality (Belgium project), engine repair (Japanese project) etc., but the staff that were involved in these projects are not presently deployed to routinely continue such training and extension or initiate new activities. An earlier survey noted “the virtual absence of any tradition in fisheries extension activities”.

One of the prerequisites is to get closer to the fishermen in order to assess their needs and attitudes towards training and extension. The Fisheries Department admitted an urgent need to communicate better with fishermen, as presently there is a considerable gap. Although the Fisheries Department has fishermen on staff (e.g. as observers) none are trainers in navigation, safety at sea, or vessel equipment, for example. The Suriname navigational school (a “foundation”) currently has training courses for small vessel skippers and home trade vessels. The navigational school has been operating since the 1940s and the Ministry of Education pays lecturers. Some contacts felt that this school can probably tailor courses to the needs of the Fisheries Department on request.

We **recommend** that one of the ICRAFDP tasks be to conduct a more thorough review of the training and extension arrangements that are possible by local networking. We also **recommend** that the Fisheries Management Plan set out the training and extension required in support of the various fleet and fishery initiatives with adequate attention to human dimensions such as alternative livelihoods where fleet capacity management takes the form of effort reduction and alternative fisheries are not options in given locations. Regardless of the organisational structure of the 3 major community development centres, we **recommend** that they incorporate on location some capacity for training and extension, especially if they are to serve as the main points of interaction with the fishermen and as the formalisation of fishermen’s groups proceeds.



The required number, duties and qualifications of the extension officers needs to be determined on the basis of planned small projects. However, a topic identified for immediate attention by a number of contacts was outfitting artisanal vessels with safety and communications equipment and ensuring that fishermen were trained to use the items properly. Given the sales focus of the community centres, this could be an appropriate pilot project for an integrated approach to extension and organisational development in addition to that under WBS 570.2.

## **Aquaculture**

The aquaculture potential of Suriname (up to 50,000 hectares) has recently been recognized, partly through interest demonstrated by private sector investment in tilapia and shrimp farms. The Fisheries Department wishes to establish a legal and managerial framework to support the controlled development of a sustainable aquaculture sector while reducing negative impacts on the environment, and the negative impacts of other industries on aquaculture. The sector is presently virtually unregulated, and the Fisheries Department's resources in the area are particularly limited. Aquaculture is now temporarily joined to Management and Development (see **Appendix 3**), but should separate when people return from training or additional staff are hired. The aquaculture section shares vehicles and other support facilities with the fisheries sections. The Department is training one person in an MSc overseas, while the sole aquaculturist on staff, assisted as needs be by his fisheries colleagues, now does everything that is presently required. That officer services 5 aquaculture operations, and relations with them are said to be good. The sequence of actions for an investor to get established is: (1) submits proposal with an EIS, (2) applies for land from natural resources ministry, (3) government finds suitable land if project is approved, (4) investor proceeds alone or with help of Fisheries Department, (5) Fisheries Department monitors operations.

Fisheries authorities and private investors described the following issues:

- Lack of legislation to protect the aquaculture industry from other activities such as mining (mercury contamination) and to set aside areas specifically for aquaculture development
- Need more government support for developing the sector such as promotion and general awareness, construction of infrastructure, utilities,
- Demand for training potential workers at vocational institutions and students at university as part of manpower planning for the future

- Concerned about lack of control over quick-profit firms destroying the environment
- Research needed on growth and nutrition of farmed organisms using local or overseas expertise, perhaps with latter partially funded by the private sector
- University does not have adequate expertise in aquaculture to train local scientists, so government scholarships for studying aquaculture overseas could be an interim measure
- Need better local laboratory facilities as it is not practical to send samples overseas for a wide range of tests due to costs and poor air communication
- Although a licence is needed to import fish brood stock, and there is concern over illegal and unreported introduction of exotic species
- Problems with water quality and dynamics of water supply and effluent in river systems
- No formal forum for discussion and decisions related to aquaculture following the demise of the short-lived national aquaculture board

Mainly because government servicing of large-scale commercial aquaculture has the potential for cost recovery, or perhaps even income generation, and it can be managed fairly independent of capture fisheries, the Fisheries Department has supported the proposed establishment of an Aquaculture Institute through a project. The draft Aquaculture Act envisages the Institute as an option to be considered two years after the law has come into force under the Fisheries Department, but fisheries authorities see this parastatal body, with private sector on the board, as an immediate need to implement research, planning, management and training. The Department will seek external assistance to set up the Institute and have the external experts train local counterparts to take over within a specified period. Fisheries officials were uncertain what aquaculture functions would remain in the Fisheries Department after the Institute was set up, given the intention to retain legal responsibility for the sector.

The draft Act contains the following operational sections that dictate recommended capacity:

- General aquaculture management
- Aquaculture permits
- Protection of the aquatic environment
- Control of diseases of aquatic animals
- Importation and movement of aquatic animals
- Export of live aquatic animals and aquaculture products

- Enforcement

The study team **recommends** that the Aquaculture Institute be set up as a matter of urgency, starting as a project under the Fisheries Department. The initiative is too significant to be accommodated by capacity building within the Fisheries Department. For this project to be effectively executed we **recommend** that the Aquaculture Act come into force as soon as possible, paving the way for the National Aquaculture Committee of government representatives to ensure that regulatory coordination is facilitated. The previous aquaculture board apparently ceased to function because government members wanted to focus on policy issues while private sector focused on immediate gains and getting assistance from government to improve profitability. Because of this experience we **recommend** that a separate social partnership steering committee be formed to guide the establishment of the Institute. This partnership will provide the Fisheries Department with technical expertise that is now more readily available in the private sector. Educational and training institutions should also be involved from the outset to address the human resources issues noted above. The Faculty of Technology of the University of Suriname offers an undergraduate course in Aquaculture and Fisheries (see **Appendix 7**), but the aquaculture components are inadequate for industry needs. We **recommend** that urgent attention be paid to improving the course content.

Regarding the capacity to embark on the Institute project and the Institute's proposed structure the team **recommends** that aquaculture officers receive training in database management, statistical analysis and interpretation along with their fisheries colleagues in order to prepare them for assembling the baseline information for the project. No further capacity building in this section will be necessary unless the project fails to materialise in the near future. Should this be the case, we **recommend** that recruiting and training persons in the areas set out for the Institute (see **Appendix 3**) would strengthen the aquaculture section as it operates in the form of a project unit during the transition phase.

Other areas such as laboratory and certification facilities have been addressed above regarding the fish quality institute. Concerning the structure, staffing and equipping of the proposed Aquaculture Institute, the emphasis in the project outline received seems heavily weighted in favour of administrative arrangements and personnel. We **recommend** that the project proposal be reviewed and revised in terms of the demand from potential investors and

managers for technical and scientific products. In particular, a decision on the Institute's involvement in research and development independent of the private sector must be clearly articulated.

## **Financial Resource Acquisition and Disbursement**

Government funds in the approved budget – see **Appendix 11** are available in theory, but often not accessible when permission to spend is requested.

Logistically, fisheries research and development activities involve a complex set of operations, requiring precise scheduling of a large variety of inputs for activities often dispersed over extensive and remote geographical areas. Thus, financial disbursement procedures must be flexible.

It is therefore **recommended** that ICRAFDP funds be disbursed from the CARICOM Fisheries Unit through direct payments to suppliers of goods and services as far as possible to ensure flexibility/timeliness in disbursements.

## **Human Resource Development**

The recommendations outlined herein for human resource management and development take into account the Government's role in this matter. The components of human resource management are; training and development, organization development, career development, organizational/job design, human resource planning, performance management systems, selection and staffing, compensation/benefits, employee assistance, labour relations and HR research and information system. The components recommended below for critical action are:

- Job Design/Descriptions
- Performance Management Systems
- Training and Development

- Manpower Planning
- Career Development
- Compensation

## **JOB DESCRIPTIONS**

The Job Descriptions (See **Appendices 8 - 10**) have been reviewed taking into account the existing situation at the Fisheries Department, the existing requirements according to the Five Years Work Plan, and the draft Fisheries Management Plan. The Job Descriptions (list of duties) need further elaboration. We **recommend** that these job descriptions be reviewed within the context of the next strategic planning cycle. These re-written job descriptions should reflect the following:

- (a) Review of the Job Structure, particularly with a view to accommodating better career paths.
- (b) The need to incorporate internal and external linkages within the Job Descriptions of Management/Senior Staff (**Appendix 8b**) gives the **recommended** formats for support staff, supervisory staff and management/senior staff at Exhibits 1 - 3, respectively). The assignment of responsibilities for linkages to individual staff (both local/regional and international) can only serve to strengthen the capacity building efforts currently under way. The present job descriptions do not mention these important linkages. Existing linkages can be described at these levels, namely:

*Level 1: - Direct contact with clients stakeholder, on day-today basis.*

- (i) Department of Fisheries
- (ii) Ministry of Agriculture, Animal husbandry and Fisheries
- (iii) Government of Suriname
  - Ministry of Trade and Industry
  - Ministry of Health and Health Lab
  - Ministry of Finance and Planning

- Ministry of Defence
- Ministry of Legal Affairs (Legislation)
- (iv) Fishermen
  - small (artisanal) near in shore (coastal)
  - industrial (shrimp, fish)
- (v) Processors/Exporters Shrimp, fish
- (vi) Local retailers
- (vii) Fishery Advisory Committee

*Level II: Direct contact with clients and stakeholders (on less frequent basis/occasionally)*

- (i) Maritime Authority
- (ii) Institute for Nature Conservation
- (iii) University Faculty of Suriname
- (iv) NMOS (Environmental Authority)
- (v) Fish Quality Institute\*
- (vi) Development Bank/Commercial Banking Centre
- (vii) Countries that border Suriname – Guyana, Venezuela

*\*Proposed agency not yet in existence*

*Level III: Indirect contacts are made for less frequency than in Levels I and II and in most instances through the Ministry of Animal Husbandry and Fisheries.*

- (i) WECAFC,
- (ii) UN-FAO, UNCLOS, International Legislation/Agreement, IMO
- (iii) CFU
- (iv) CARICOM
- (v) Regional Legislation/Regimes/Agreements

- (c) Item (b) above presupposes that the jobs being described have been evaluated. Of the known Job Evaluation System in use, we **recommend** the Factor Comparison Method as being the best suited primarily because of its ease in allowing for the establishment of relationships at the Management, Supervisory and non-Management levels.

The significant benefits to be derived from the Factor Comparison Method are these:

- Compensable Factors, while being the framework of the assessment standards to be used, provide a sound basis for determining the position of the Grade lines and thereby assist in the development of a sound salary structure.
- The system is easily understood and will ensure that all jobs are assessed to the same standard of consistency within the organization.
- The range of characteristics used and the weights applied will be selected and tested within the organization.

The development of the competencies, skills and attitudes among all levels of staff is a critical element of capacity building. It is therefore expected that significant levels of resources and effort shall be geared towards a Human Resource Development Programme to ensure the sustainability of the thrust to further develop the Fisheries Sector of Suriname.

Consequently , a systems approach to Human Resource Development is recommended within the framework of a systems view of organizations in which there is full recognition that analysis of existing systems are undertaken and the strengths built-on, and when one changes one part of the sub-system of an organization, it affects the other parts.

The components for Human Resource Development at the Suriname Fisheries Department examined were:

- Performance Appraisal Sub-system;
- Training and Development sub-system;
- Career Development/Succession Planning sub-system;
- Periodic Job Evaluation and Compensation Regimes that seek to develop job and position description for all staff and reward staff consistent with performance;

- A manpower planning system that is strategically linked to the Planning, Implementation and Evaluation process;
- A Human Resource Development Approach that contains a Training Needs Survey to determine training and development needs of staff consistent with the strategic/medium term direction of the Department, to meet job requirements now and in the future.

In consequence of the foregoing the following observations and recommendations are made:

#### **SKILLS/COMPETENCIES**

**Appendix 10** sets forth the academic qualifications and experience of staff. In general, the skills level of staff needs to be upgraded. A Training Needs Analysis is therefore **recommended**. The Scope of Work should be defined as follows:

- To undertake a Training needs Assessment of managerial/Technical/Professional and Support staff in order to identify skills gaps.
- In consultation with the Ministry of Animal Husbandry and Fisheries, and Management of the Fisheries Department, to identify career development paths to determine the entry level in the various disciplines.
- To develop a structure programme of training to fill the identified skill gaps in consultation with Ministry and Department Managers.
- To recommend testing mechanisms to determine suitability for training.
- To design an internal development system to facilitate identification, training and placement requirements (this is to ensure the sustainability of this intervention).



In the interim the following is **recommended**:-

### **Heads of Unit**

It is desirable that all Heads of Units – Research and Statistics, Extension and Development, Aquaculture and Finance and Administration, have at least a BSc. Degree in the relevant discipline plus five years experience, or a Masters Degree in the relevant discipline, plus three years experience. A programme of training should therefore be undertaken to bring present job incumbents who are not at this level, to the desired minimum level outlined above. A manpower plan should be developed that ensures an phased approach to training that does not negatively impact the programme of work to be undertaken in the medium to long-term.

### **Deputy Heads of Unit**

The Deputy Heads are immediate Supervisors of the following functional areas:

- Research
- Fisheries (Technical) Information System
- Quality Assurance/Control
- License Administration and Control/Extension and Training
- Human Resource and Administration
- Finance

The minimum educational and experience requirements desired are a BSc. Degree (or part-professional accounting qualifications in the case of Finance) in relevant area of discipline plus three years experience. An analysis of skills/qualifications at **Appendix 10**, leads to the recommendation that the Manpower Plan should include training of the Deputy Heads, over time.

### **Other Supervisors and Staff**

Qualifications and experience appear adequate. All staff should benefit from the staff development initiatives such as:

- On-the-job training
- Staff exchanges/attachments with other relevant organizations through inter-agency linkages to foster a transfer of technology and knowledge
- TCDC approach

The identified needs for skills building of staff should come from, *inter-alia*, the performance appraisal system.

### **PERFORMANCE APPRAISAL**

The Fisheries Department has a performance appraisal process in place which is typical of the traditional governmental agencies/organizations – staff are appraised annually based on a formal, standardized instrument of appraisal, and increments/proportions are awarded. There was no evidence found during the visit and interviews, that this process is integrally linked to human resource development, or the planning, implementation and evaluation systems. The process of staff appraisal is therefore routine and as such there does not exist much pro-activity.

Within the context that this annual appraisal exercise is universally practiced within the Civil Service and as such ingrained within its culture the following approach to performance appraisal within the Department is **recommended**:-

- Quarterly Work Plans are currently prepared by Unit Heads/Deputy Unit Heads and other Senior staff. These Quarterly Work Plans are important monitoring tools for performance and therefore can serve as the basis for the annual performance review exercise which will become more meaningful. A brief comment on staff achievements, etc in this Quarterly Report shall reduce biases/subjectivity by Supervisors.

- A simple statement be made on the annual review document on weakness of job incumbents and recommended training and/or development interventions. This would facilitate career development, succession planning of job incumbents and enable the performance appraisal process to be more dynamic. These comments should then be incorporated within the Department’s Manpower Plan.
- It would be difficult, if not impossible, to make recommendations on Job Evaluations and Compensation Surveys (which are important precursors to dynamic performance and reward systems) since these are constrained by the rules and regulations of the Civil Service. Nonetheless, a general observation made in respect of compensation within the Fisheries Department is that the level of compensation is not competitive. Thus, there would be some legitimate concerns in respect of attraction and retention of trained staff who may be enticed away by competitors who pay at a much higher rate. This reality must be factored into any training exercises to be undertaken, and recruitments.

#### STAFFING NEEDS

The Team supported the recommendations of Suriname’s Fisheries Department Staff and CFRAMP staff on the staffing needs that would be required if the Fisheries Department stayed as one entity, or during the proposed “transitional phase” which includes the two (2) project units that later break off into the institutes.

The ideal staffing based on the status quo is presented below and envisages the recruitment of 33 persons. Suriname is not likely to get this much staff under the status quo. Whole new opportunities for serious strengthening arise if the aquaculture and fish quality institutes are formed.

<b>Personnel Posts</b>	<b>No. of Persons</b>	<b>Observations and Qualifications</b>
Head, Fisheries Research	1	With Biological, social and economic training
Head, Data Collection	1	With Biological, social and economic training

Deputy Head, Data Collection	1	- do -
Head, Data Processing	1	With training in communication
Deputy Head, Data Processing	1	- do -
Fisheries Biologist	1	With social and economic training
Research Assistant	2	- do -
Data Collectors/Enumerators	10	Work land or sea in rotation
Quality Assurance Technicians	7	With emphasis on inspection and extension
Aquaculture Officers	3	Planning & marketing, environmental assessment
Fisheries Communication Officer	1	
Project Development & Planning Officer	1	
Extension Officers	3	One for each of the community development centres
<b>TOTAL</b>	<b>33</b>	

### RECRUITMENT

In order to undertake the programme of work envisaged by the Fisheries Department, inclusive of the EU:ICRAFD Five Years Work Programme, the following is proposed. It is recommended that a total of nineteen (19) personnel be acquired to implement the first two years of the Five Year Work Programme. These are as follows:

UNIT	PERSONNEL	NUMBER	COSTS (2 YRS) US \$
	Fishery Biologist	1	14,400
Research & Statistics	Fisheries Officer (research)	1	14,400
	Data Collectors	5	36,000
	(and observers)	3	21,600

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Extension & Development	Technician (Q.A)	1	
Quality Assurance & Control	Technician (Freshness laboratory)	2	7,200
	Processing plant auditors	4	14,400
Extension	Fisheries Community Development Officer	1	28,800
	Fisheries Communication Officer	1	14,400
	Subtotal		165,600

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Note: The need in aquaculture would require that hired persons be trained

**OTHER COSTS**

Subsistence/transportation	9,000
Subsistence allowances	16,000
Sample purchase	5,000
Fuel costs	12,000
Accommodation (rental)	8,500
Equipment maintenance/accessories	7,000
Subtotal	<u>58,900</u>
<b>Grand Total</b>	<b>224,500</b>

**Equipment:**

The equipment identified in the 5-6 year work programme was deemed appropriate and should be provided.

**Framework For Building Capacity**

The recommendations above are presented by Fisheries Department section and do not provide a structured view of cross-linkages. A capacity-building framework can be applied to summarily fit the more important recommendations into categories useful for a holistic view.

## WORLD VIEW OR VISION

This is a mission statement or policy statement actively used.

- Improve FMP objectives by incorporation of concepts from international instruments.
  - Operationalise the objectives of fisheries management in the draft FMP as modified
  - Incorporate FMP objectives into policy documents, legislation and other media
  - Communicate FMP objectives to all fisheries stakeholders and interested parties
  - Position fisheries more prominently in the realm of environmental management
- Use the Fisheries Advisory Committee or National Dialogue Group to keep updated.

The Fisheries Department of Suriname has a mission statement which adequately captures the vision of the Ministry, Fisheries Department and key stakeholders. This mission is expected to be attained through implementation of the Fisheries Management Plan (draft), complemented by the EU funded ICRAFD Five Years Work Programme for Suriname which elucidates clear mission and goals for Fisheries development. Critical to the success of the Fisheries Department in attaining its vision, is the “buying in” or the facilitation of ownership of this vision by the key stakeholders. To this end, **we recommend** the recruitment of a Fisheries Community Development Officer who shall be directly responsible for building and maintaining public and community awareness of critical resource management development and policy issues, shall foster a broad-based consultative approach that will cement the vision for national fisheries management and development. It is also **recommended** that this approach be augmented by the development of a Department Communications Programme which shall be maintained by a newly recruited Fisheries Communication Officer, to ensure sustainability and active participation in the process of sharing and buying-in of the vision. (Job Descriptions for both recruits are at Appendix G).

This ownership building process must emphasise and effectively communicate the need for Community/Fishers Organizations which are sustainable (market driven). Contacts with stakeholders emphasized the need for Organizations that have been developed around income generating activities. We therefore **recommend** that rather than focus initially on the establishment of formal Organizations, income-generating small projects be first designed and developed, and managed by small groups of fishers, etc. If this approach is accepted the

skills requirement of the Fisheries Communication Officer should include expertise in micro-businesses design and development and small groups dynamics. Formal Organizations will then coalesce around these (market-driven) income-generating activities through deliberate interventioning such as training, attachments, etc.

### **ORGANIZATION CULTURE**

The culture that exist within the Fisheries Department can be deemed the traditional management culture that pertains in Government bureaucracies throughout the Dutch speaking, Anglophone and Francophone Caribbean. This culture was inherited from the Region's colonial masters and, as such, changing it to a more result-oriented and market-driven one – a total quality culture at both technical and managerial levels – is a challenging proposition.

This includes shared beliefs that determine the ways of doing things in the Department.

- Build on the industrious and innovative characteristics of present staff
- Reduce dependency on other employment for supplementary income
- Reinforce close relationships between the sections of the Fisheries Department
- Place more emphasis on working closely with all sections of the fishing industry
- Ensure that external assistance is obtained mainly on the basis of national priorities

Nonetheless, an incremental (gradual) approach to achieving a total quality culture is recommended for the Department which would be consistent with the Government's stated goals to increase fishery production and consequential contribution to G.D.P./foreign exchange earnings, and the obligations of the EU funded ICRAFD programme. The ideal state envisaged in respect of culture is for the Department to be an organization with the following characteristics:

- Clear Mission and Goal (based on broad-based consultations);
- Results oriented and driven;
- Responsiveness to clients, customers and collaborating groups and agencies (market driven);

- Empowered staff at all levels;
- Flexible/Problem solving structure;
- Human Resource Management Systems that are proactive and employee – oriented;
- A total quality culture (technical and managerial);
- A sustainable organization.

The interventions/recommendations contained within this Report in respect of human resource development, additions to staff complement, maintenance and development of linkages with national, regional and international agencies, enhancement of technical delivery systems are considered critical to achieving the defined mission, goals and objectives of the Fisheries Department. These recommendations will also facilitate adaption to changes in the operating environment.

## **STRUCTURE**

### **NATIONAL LEVEL**

The appropriateness of the organizational structure of the Fisheries Department was assessed not only in relation to fisheries research and development priorities and objectives, but also in relation to key planning, management, and linkage functions which must be adequately performed by a national fisheries research and development system and its constituent organizations. Three of the most important functions are strategic planning, human resource management and financial resource acquisition and disbursement.

### **STRATEGIC PLANNING**

Strategic planning of national fisheries research and development involves effective centralized control over the determination of research and development priorities and objectives, the delineation of research and development programmes and specific institutional arrangements, and broad allocation of financial and/or human resources to both institutions



and programmes. Without such control, a national fisheries research and development system cannot develop and mature.

The degree to which the organizational structure of fisheries research and development in Suriname is appropriate for strategic planning purposes depends on the pattern of governmental responsibility and, in particular, the extent to which this responsibility is concentrated in a single organization, and the effectiveness of mechanisms which have been developed to coordinate the activities separate by constituted fisheries research and development organizations.

In practice, the patterns of governmental responsibility for fisheries and fisheries-related matters in Suriname was observed to be determined by one main type of organizational fragmentation: inter-ministerial, where important areas of fisheries-related matters come under the responsibility of more than one Ministry.

Ensuring effective strategic planning within the national fisheries research and development systems is invariably complicated further by a second major type of organizational division namely, that which exists between the Ministry with overall responsibility for fisheries matters and the university sector. The University of Suriname does some fisheries research in its Faculty of Technology and is staffed by able and high trained personnel, many of whom have the training and skills to make a significant contribution to the national fisheries research and development effort.

However, given the considerable organizational independence enjoyed by the University, academic staff have considerable freedom to pursue their own research interest, largely dependent of national research priorities.

As mentioned previously, a review and rationalisation of fisheries-related bodies to enhance synergies to sustainable fisheries research and development is recommended. For example, using major organizational restructuring to achieve greater control over fisheries research undertaken by university personnel is neither desirable nor feasible. It is essential however,

that the main Ministry (Ministry of Animal Husbandry and Fisheries) responsible for fisheries, be able to strongly influence the university research effort.

The Fisheries department of Suriname has an organization structure that encompasses a clear definition of roles, duties and responsibilities of staff, and lines of communications. The organogram, units' roles and responsibilities and description of duties are detailed at **Appendices 3, and 8 to 10.**

The reporting lines and the use of information and communications technology within the Department facilitate spans of control for Supervisors/Heads of Unit, that minimizes bureaucracy, enhances the team/multi-disciplinary approach to work and flexibility/speed in decision-making within the parameters set by the Ministry of Animal Husbandry and Fisheries. Any changes in the structure of the Department need to consider:

- Revised relationships are needed to reflect fish quality and aquaculture institutes
- Committees on fisheries and aquaculture, and other bodies extend department's capacity
- Better defined and staffed training and extension service is an important addition
- Additional resources are required for community projects and organisations

#### **ADAPTIVE STRATEGIES**

Since the ultimate aim of capacity building is "behaviourial change" in which people do things more effectively, there must be equal emphasis on the process of change as well as the content of change. Hence, equal emphasis on systems development as well as human resource development is critical.

With regards to the technical systems within the Fisheries Department, the following were examined:

- (i) Research and Statistics
- (ii) Extension and Development
- (iii) Planning
- (iv) Information
- (v) Data Collection

## **THE MEANS FOR ADAPTATION TO CHANGES IN THE OPERATING ENVIRONMENT INCLUDES:**

- Creation of Institutes where independent revenue generation and services are feasible
- Recruitment of students to working fisheries projects and be possible recruits
- Continued use of fishermen in data collection and observer programmes
- Several officers able to cover the duties of, or assist, those in other sections
- Legislative system permits flexibility of ministerial instruments of governance

### **SKILLS**

Knowledge, qualifications, competencies as individuals and collectively:

- Community workshop organisation, facilitation and meeting skills are essential
- Operation of observer programmes and training of observers requires attention
- Data analysis and information generation must be wider than only for stock assessment
- Refreshers are required in biological, catch and effort data collection and processing
- Fisheries Officers (Community and Business Development) and (Communication)
- Project development implementation and monitoring are additional skill required

### **MATERIAL RESOURCES**

Technology, finance, equipment, infrastructure, physical assets:

- Consumables for fisheries research and information field activities required
- Computers and accessories, including perhaps one laptop
- Communications and presentation equipment
- Project funds from local and external sources

### **LINKAGES**

Concerns relationships with individuals, groups that facilitate pursuit of goals:

- Acknowledge the importance of networks and use them to enhance capacity
- Collaboration with other government agencies and coordinating committees

- Regional linkages through CRFM and WECAFC, bi-lateral fisheries committee
- Integration of university programmes into national and regional fisheries research

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# Appendices

## APPENDIX 1: TERMS OF REFERENCE

### 1. Background

Following a financing agreement between the Commission of the European Union and Member States of CARIFORUM, the technical and administrative provisions for the implementation of the Integrated Caribbean Regional Agriculture and Fisheries Development Programme – Fisheries Component (ICRAFD) was set up. The CARICOM Fisheries Unit (CFU) as implementing Agency in Belize, commenced implementation of ICRAFD which has as its overall objective the following:

- (a) To strengthen fisheries planning and management capacity of national fisheries departments in CARIFORUM countries. These Departments are responsible for formulating fishery policies, elaborating plans and implementing programme. To do this well, they require reliable and timely information on the structure and performance of the sector and the status of the resources.
- (b) To enhance the effective participation and support of fishers' communities in the planning and management process of the fishing industries for the sustainable use of the coastal and marine fishery resources. Good fisheries policies and programmes must start from the bottom, hence the importance of understanding their perspectives.

A 5 – 6 year work programme to be funded under the ICRAFD Project was prepared by the Fisheries Department of Suriname in collaboration with the CFU. The Plan seeks to address some of the critical issues affecting the fisheries sector in Suriname 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 systems;
- 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.

The agreed upon programme of work also provides for technical assistance to be rendered to the Fisheries Department to strengthen the planning and policy framework, and improve the system of governance<sup>1</sup>. Against this background, the ICRAFD project will; *inter alia* support a review and preparation of recommendations for the strengthening of the organizational structure and operational arrangements of the Fisheries Department.

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<sup>1</sup> 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, and as such, the Department must be empowered, equipped, organized and staffed to undertake the complex tasks associated with these responsibilities.

## **2. Purpose**

The purpose of this assignment is:

- (ii) 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.
- (iii) to undertake an external strategic management assessment of the Fisheries Department 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 are validated. The external assessment shall focus on identifying 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 the CARICOM Regional Fisheries Mechanism (CRFM) and WECAFC, national fisheries policy, law and developments such as the new fisheries management plan.
- (iii) to undertake an internal management assessment of the Fisheries Department 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 relationships among the various units and functional areas of the Department, including important aspects of the organizational culture which will assist in strengthening the organizational structure. 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 mandate, functions and responsibilities of the Fisheries Department and the organizational structure and human resources available to discharge these responsibilities, including interaction with local and overseas agencies involved in the fisheries sector.

## **3. Time Allotment**

The assignment will be conducted over a period of 25 person days between August and September, 2000.

## **4. The Approach**

The consultant shall undertake a field visit to Suriname in order to obtain information from key actors within the Ministry of Agriculture, Animal Husbandry and Fisheries, the Fisheries Department and Fisheries Sector on:

- internal management structure and systems of Fisheries Department
- key actors and relationships, and structure of the external environment
- technical operational systems of the fisheries Department levels of efficacy and effectiveness in the delivery of outputs



- present incumbents/staffing arrangements, and job structures and descriptions, performance measurement system, compensation regime and Human Resource Development activities.

The consultant shall review resource documentation including:

- National Fisheries Sector Plan (Current)
- ICRAFD Five year Work Programme for Suriname (April 2000 – March 2005)
- Completed Questionnaires re Planning Mission to Suriname
- Baseline Survey of Fisheries Department
- Key Informant Interviews – Questionnaires completed
- Fisheries management plan
- Present and proposed fisheries legislation
- Documentation on fisheries policy, planning and management

## **5. Team**

The consultancy team shall comprise the following mix of skill:

- Strategic Planning and Organizational Development/Human Resource Management and Development
- Fisheries Management
- Fisheries Biology

## **6. Expected Outputs**

- A report with recommendations for a plan of action to build and strengthen the capacity of the Fisheries Department in Suriname both directly through institutional linkages.
- A recommended organizational structure for the Fisheries Department to create the organizational and institutional capability necessary to effectively and efficiently discharge the mandate, functions and responsibilities in accordance with the Government policy directives, the evolving needs of the fishing and aquaculture sector, technological advances particularly in information systems, and the new challenges and opportunities presented by the changing global fisheries regime.

## **7. Team composition**

The study team comprised:

Mr. Reuben Charles (Team Leader), R&P Consultant, 7 Goedverwagting, East Coast Demerara, Guyana, Mr. Anthony Mills, Program Administrator, CARICOM Fisheries Resource Assessment and Management Programme (CFRAMP), Belize City, Belize, Dr. Patrick McConney, Chief Fisheries Officer, Fisheries Division, Ministry of Agriculture and Rural Development, Barbados

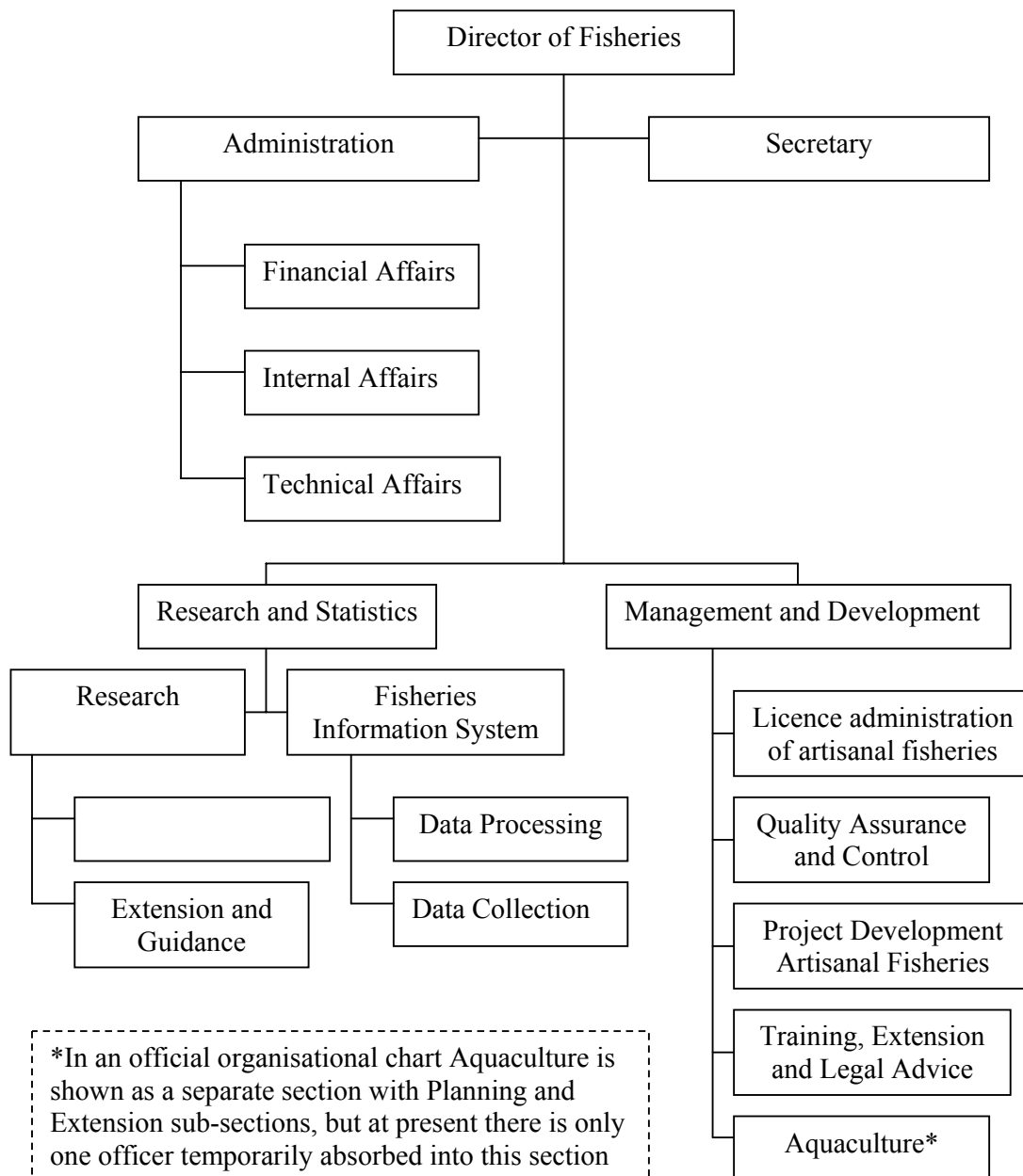
## APPENDIX 2: LIST OF CONTACTS IN SURINAME

Mr. R. Lieveld	Director of Fisheries
Ms. J. Colli	Head of Extension and Development
Ms Y. Babb-Echteld	Head of Research and Statistics
Mr. B. Drakenstein	Fisheries Officer, Legal Adviser
Ms T. Chin-A-Lin	Fisheries Officer, Fisheries Information System
Mr. J. Debipersad	Aquaculturist
Mr. M. Madarie	Fisheries Officer
Ms C. Schet	Financial Administrator
Mr. A. Kenswil	Administrator (Human Resources)
Mr. F. Baal	Head, Nature Conservation Division, Ministry of Natural Resources
Mr. U. Karg	Suvveb fish processing plant
Mr. S. Walton	Suvveb processing plant
Mr. L. Heidanus	Policy Adviser, Surinam American Industries Ltd. (SAIL), processors
Mr. van Dongen	Comawena Shrimp NV (COMAS) aquaculture enterprise
Ms M. van Dijk	Comfish NV aquaculture enterprise
Mr. M. Amafo	Head, Ship Inspection, Maritime Authority of Suriname (MAS)
Mr. W. Palman	Ship Inspector, Maritime Authority of Suriname (MAS)

### APPENDIX 3: STRUCTURE OF FISHERIES DEPARTMENT

Figure 1. Present structure of the Fisheries Department

Due to staff shortages some officers perform the duties of more than one position.



\*In an official organisational chart Aquaculture is shown as a separate section with Planning and Extension sub-sections, but at present there is only one officer temporarily absorbed into this section

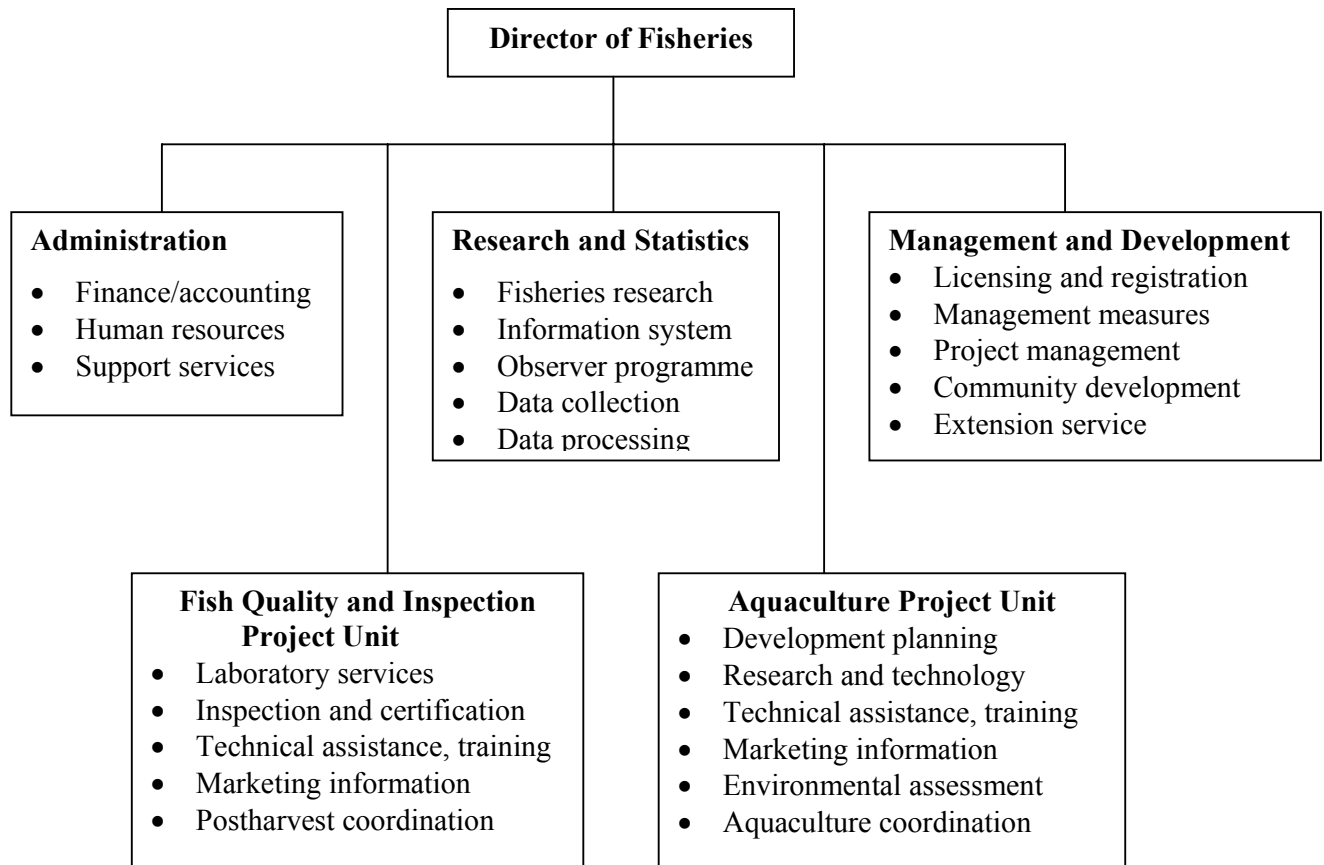


figure 2. Proposed transitional structure of the Fisheries Department

The sections dealing with Fish Quality and Inspection and with Aquaculture are transformed into project units in a pre-Institute phase in order to facilitate the establishment of the new Institutes. The Institutes will subsequently recruit all or most of the staff in the project units.

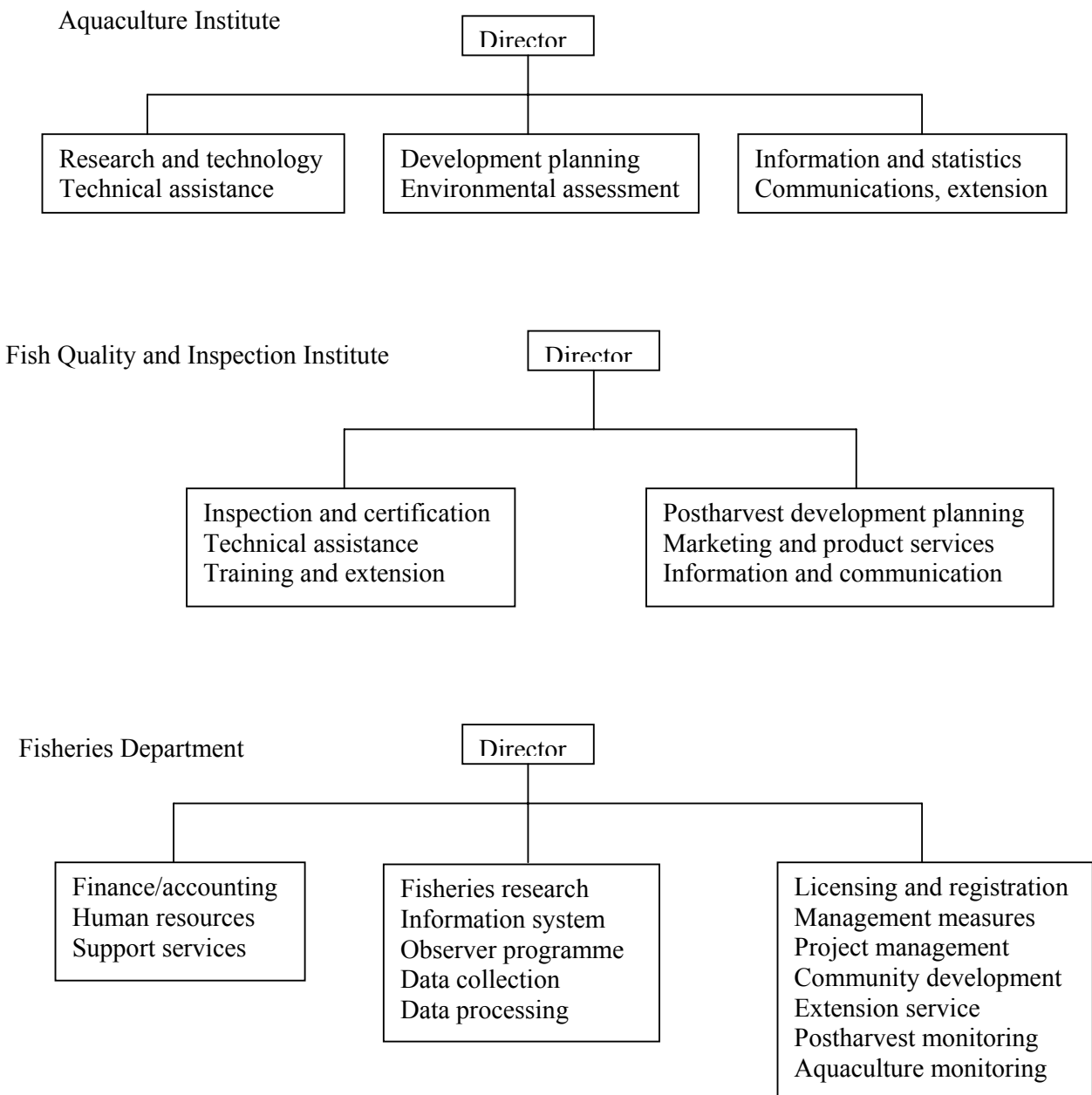


Figure 3. Final arrangement of the Fisheries Department and the Institutes

The structures of the Institutes above are thematic. Details of internal structures will have to be determined by legislation and specifics of anticipated roles and outputs. The Fisheries Department is expected to retain legal jurisdiction over these areas and therefore must have some monitoring or oversight capability in addition to its interaction through the committees.

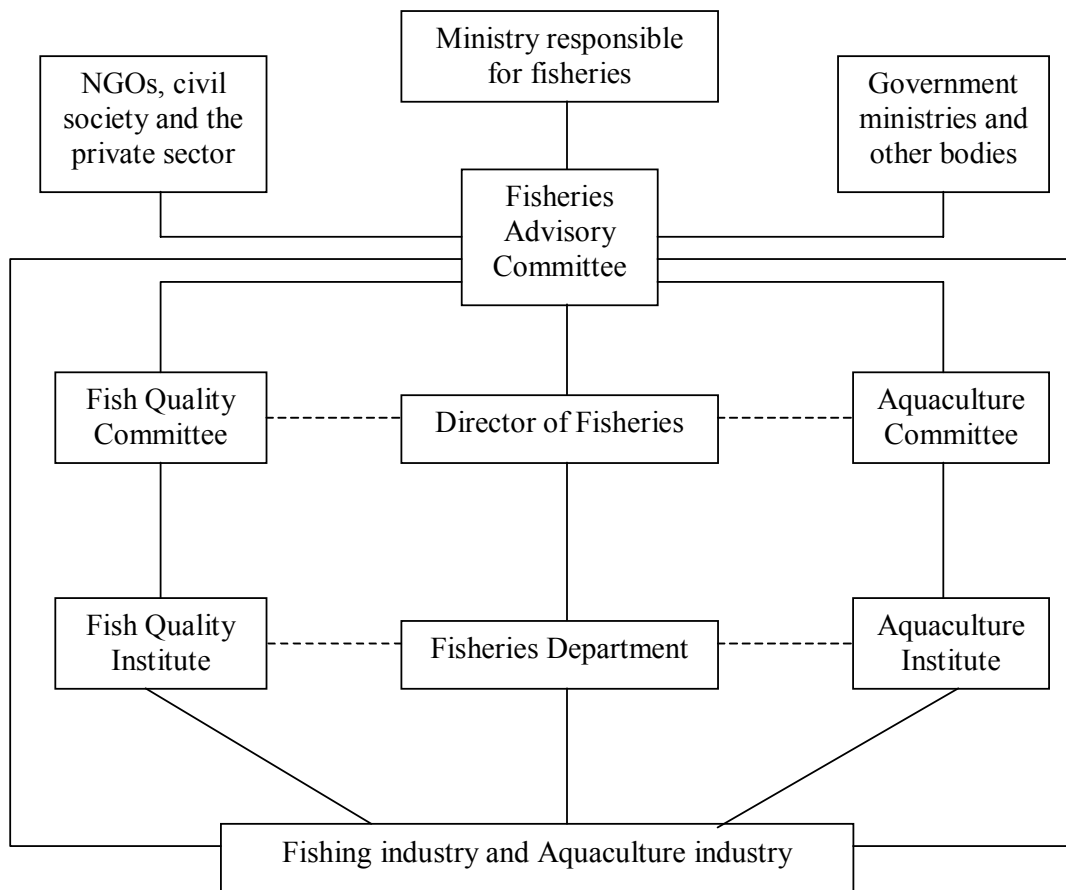


Figure 4. Relationships between fishing industry stakeholders and institutions  
 In this model the Fisheries Advisory Committee has a more significant coordinating role than envisaged at present in the draft Fisheries Act by functioning as a meta-committee comprised of representatives of several, more specific, committees throughout the governance system.

#### APPENDIX 4: COMMENTS ON ICRAFDP FIVE YEAR WORK PROGRAMME

As noted previously, the Fisheries Department of Suriname and the CARICOM Fisheries Unit have already prepared the ICRAFDP five-year work programme. This study on upgrading organisational structure and capability is part of the programme. Below we briefly summarise how the other programme components may relate to our recommendations. Please refer to the programme document itself for descriptions of purpose, approach and output.

<b>Components of ICRAFDP Five Year Work Programme for Suriname</b>	<b>Comments on relevance of components to upgrading fisheries structure and capability</b>
<b>WBS 300: FISHERIES MANAGEMENT DATA SYSTEMS</b>	
WBS 310.1/320.1: Review the Data Collection and Management Systems	This should form the basis for confirming or modifying the recommendations on capacity. In particular the human dimensions of the systems must not be overlooked. Attention must be paid to systems that include alternative data to the conventional stock assessment requirements.
WBS 310.2: Enhance data collection plans covering the major fisheries	This must involve field staff and other fisheries stakeholders, such as processing companies. Attention must be paid to systems that include alternative data to the conventional stock assessment requirements. The factors that affect performance of duties must be factored in to the enhancement. Reporting and communication relevant to the industry must be considered.
WBS 310.3: Train fisheries division's staff in data collection	The existing and newly recruited staff involved in data collection and management will participate in workshops on data collection and management to which key industry stakeholders should be invited for an overview session in order to enhance their capacity to assist.
WBS 310.4: Database software for data storage, basic analysis and reporting	Specialised software should be employed only to the extent necessary. Current staff limitations result in officers having to cover several other areas of responsibility, and software may not be fully utilised unless its application is widespread.
WBS 310.5: Train Fisheries Divisions Staff in using the Database Software for, Data Entry, Analysis and Reporting	All of the previous comments will determine how this is approached. Consider linkages to the Shrimp and Groundfish Working Group.
WBS 310.6: Provide resources for implementation	The computer and software to support data entry, basic analysis and reporting, and the field sampling material and equipment, must be selected on the basis of specific needs and easy replacement or upgrading.
WBS 310.6/320.6: Preparation of Articles and Technical Reports	The format, frequency and other features of these communication documents should be driven by industry needs, but with opportunity to include educational explanatory material.

<b>Components of ICRAFDP Five Year Work Programme for Suriname</b>	<b>Comments on relevance of components to upgrading fisheries structure and capability</b>
WBS 310.8/320.7: Monitoring and evaluation	This should be structured as collaborative oversight of the monitoring and evaluation conducted by the Fisheries Department itself in order to build capacity.
<b>WBS 320: LICENSING AND REGISTRATION SYSTEM</b>	
WBS 320.2: Enhance Licensing and Registration System	The review of licensing and registration with recommendations for refinement and further computerization Should include linkages with MAS and the stipulations in the UN Fish Stocks Agreement and FAO Compliance Agreement.
WBS 320.3: Database software for data storage, basic analysis and reporting	The review of database software must explicitly include data-sharing and international agreements as above.
WBS 320.4: Train fisheries division's staff in using the database software for data entry, analysis and reporting	The training may have to include cooperating agencies such as MAS and enforcement agencies, and take into account compatibility with their systems (or lack of them) and any plans to upgrade.
WBS 320.5: Provide resources for implementation	Ensure specificity to the needs outlined above.
<b>WBS 400: FISHERIES ASSESSMENT</b>	
WBS 421: Review and analysis of historical data	If this is fisheries assessment and not just stock assessment, the historical data on vessels, policy, people, projects, communities, agreements etc. are also relevant. This outlook will inform the skills and capacity required for assessment.
WBS 421.2. Selectivity Studies	The university involvement may be tied into the recruitment of staff. Use of fishermen and their local knowledge in these studies should increase their capacity and willingness to participate in more complex, or less applied, studies later.
WBS 421.3: Assessment of the Red Snapper Fishery ( <i>Lutjanus purpureus</i> )	As for the selectivity studies.
WBS 421.4: Bio-economic Modelling of the Fisheries	As for the selectivity studies.
WBS 421.5: Modelling of the Fisheries Biological / Ecological System	As for the selectivity studies.
WBS 421.6: Participation in the Ad Hoc Working Group on Shrimp and Groundfish	Should take into account the provisions in Annex 1 of the UN Fish Stocks Agreement even though it is not intended for these fisheries.
WBS 421.7: Monitoring	This should be collaborative oversight of monitoring by the Fisheries Department.



<b>WBS 500 FISHERIES RESOURCE MANAGEMENT</b>	
<b>WBS 510 STRENGTHENED NATIONAL FISHERIES MANAGEMENT</b>	
WBS 511: National Fisheries Policy, FMP and Advisory/Decision Making Mechanism	Activities should build upon the results of the workshops and consultations already undertaken and be closely linked to the draft Fisheries Act. They should take into account the impending fragmentation of the Fisheries Department into various institutes and relations with other bodies.
WBS 512.1: Strategic Review and Up-grading the Organizational Structure and Capability of the Fisheries Department	This is the current study.
WBS 512.2: Suriname/Guyana bi-national Fisheries Committee	This needs to also cover matters outside of the Shrimp and Groundfish Working Group. It should facilitate the induction of Suriname into the regional programme by allowing sharing and learning from Guyana's CFRAMP experiences. There is a clear need for the fishing industries of the two countries to become involved.
WBS 512.3: Mechanism for Conflict Resolution / Management	As noted in the text, the focus should extend beyond the industry alone to its interactions with government and intra-governmental matters also.
WBS 512.4: Study of Impact of Neo-liberalism of the Fisheries Sector	Full industry involvement is required here to ensure a practical business perspective is added to the study. The recent Caribbean Fisheries Agenda on Globalisation (CFAG) outlined at a recent FAO workshop which included Suriname should be taken into account.
<b>WBS 520: STRENGTHENED REGIONAL FISHERIES MANAGEMENT</b>	
<b>WBS 520: STRENGTHENED REGIONAL FISHERIES MANAGEMENT</b>	Suriname's continued participation in the development and operation of the Caribbean Regional Fisheries Mechanism (CRFM) is vital.
<b>WBS 530: SUPPORT FISHERIES AND COMMUNITY INVOLVEMENT/EDUCATION</b>	
WBS 330/530: Multidisciplinary Survey	Provides input to the entire 5-year work programme.
WBS 330.1/530.1: Baseline Survey of the Fisheries Department of Suriname	Provides input to the entire 5-year work programme.
WBS 330.2/530.2: Survey of Current Data Collection Issues	Provides input to the entire 5-year work programme.
WBS 330.4/531.1: Baseline Survey of Fishing Communities in Suriname	The information from this is essential for the design of most parts of the programme, but especially the community and project development aspects, and the training and extension. More generally this will inform the most appropriate approach to getting the users more involved in management and development.
WBS 330.5/531.2: Key Informant Interviews	Provides input to the entire 5-year work programme.

WBS 532.0: National Fisheries Workshop	This should be a critical event in the path towards more inclusive and comprehensive fisheries and aquaculture management and development. The information exchange should build the capacities of both the industry and the managers.
WBS 535: National Dialogue Group	This follow-up to the workshop should facilitate sustained information exchange and interactive decision-making until the formal procedures are in place. Care must be taken to ensure that the activities running in parallel do not conflict.
WBS 533.1: Community Mobilizing and Organization Formation	This is developed in some detail in the plan, but should be reviewed in terms of business and project, in addition to organisation, development.
WBS 533.2.1: Public Awareness Campaign	This is also developed in some detail and should be proceeded with in the context of the capacity of industry to absorb communication materials. Contacts considered face-to-face communication to be more effective and desirable than any other means. To the extent that this is feasible, the communications specialist must pay attention to supporting meetings and workshops.
WBS 533.2.2: Public Awareness Campaign II: Special Call-In Monthly Fisheries Radio Programme	The acceptance of this medium of exchange should be confirmed as well as the capacity of the Fisheries Department to follow through with addressing the issues that may be raised during call-in programmes. Later phasing of this activity after some initial capacity-building and successes may make it more effective.
WBS 533.3: Equipment Procurement and Training in Desk Top Printing	It will be necessary to ensure that laser printing and photocopying services or equipment can support these activities. Unless it has been determined that literacy and language will not be a problem, it would be advisable to include a tape or digital video camera in order to present audio-visual messages. It did not appear feasible for these services to be bought in commercially since much of the material can be do-it-yourself.
WBS 534.1: First Fisheries Field Officers Training Workshop	This appears to be a critical activity for building the capacities of several stakeholders.
WBS 534.2: Second Fisheries Field Officers Training Workshop	This appears to be a critical activity for building the capacities of several stakeholders.
WBS 536: Monitoring and evaluation	This should be structured as collaborative oversight of the monitoring and evaluation conducted by the Fisheries Department itself in order to build capacity.
<b>WBS 540: HRD AND TRAINING</b>	
Scholarships and Short-term Training	It may be advisable to include aquaculture unless the Aquaculture Institute progresses quickly.

<b>WBS 550. SURVEILLANCE AND ENFORCEMENT</b>	
WBS 550. Surveillance and enforcement	This should be connected to the observer programme, training and the work of the bi-national (or bi-lateral) fisheries committee.
<b>WBS 560: POST-HARVEST HANDLING PROCESSING AND MARKETING</b>	
WBS 560: Post-harvest handling processing and marketing	This must be closely linked to the establishment of the fish inspection or quality institute and the implementation of the recent quality legislation.
<b>WBS 570. FISHERIES DEVELOPMENT PLANNING</b>	
WBS 570.1: Study of Policy Options for Diversification of the Fisheries Sector	This work seems more suited to a well-qualified consultant than to a student, and the fullest involvement of the industry is advocated. The involvement of the university could be especially useful if new skills or technologies are required to develop the new fisheries or products.
WBS 570.2: Technological/developmental – Community Based Pilot Project	This appears to be a critical activity for building the capacities of several stakeholders.

## APPENDIX 5: UN FISH STOCKS AGREEMENT ANNEX I: STANDARD REQUIREMENTS FOR THE COLLECTION AND SHARING OF DATA

### Article 1

#### General principles

1. The timely collection, compilation and analysis of data are fundamental to the effective conservation and management of straddling fish stocks and highly migratory fish stocks. To this end, data from fisheries for these stocks on the high seas and those in areas under national jurisdiction are required and should be collected and compiled in such a way as to enable statistically meaningful analysis for the purposes of fishery resource conservation and management. These data include catch and fishing effort statistics and other fishery-related information, such as vessel-related and other data for standardizing fishing effort. Data collected should also include information on non-target and associated or dependent species. All data should be verified to ensure accuracy. Confidentiality of non-aggregated data shall be maintained. The dissemination of such data shall be subject to the terms on which they have been provided.
2. Assistance, including training as well as financial and technical assistance, shall be provided to developing States in order to build capacity in the field of conservation and management of living marine resources. Assistance should focus on enhancing capacity to implement data collection and verification, observer programmes, data analysis and research projects supporting stock assessments. The fullest possible involvement of developing State scientists and managers in conservation and management of straddling fish stocks and highly migratory fish stocks should be promoted.

### Article 2

#### Principles of data collection, compilation and exchange

The following general principles should be considered in defining the parameters for collection, compilation and exchange of data from fishing operations for straddling fish stocks and highly migratory fish stocks:

- (a) States should ensure that data are collected from vessels flying their flag on fishing activities according to the operational characteristics of each fishing method (e.g., each individual tow for trawl, each set for long-line and purse-seine, each school fished for pole-and-line and each day fished for troll) and in sufficient detail to facilitate effective stock assessment;
- (b) States should ensure that fishery data are verified through an appropriate system;
- (c) States should compile fishery-related and other supporting scientific data and provide them in an agreed format and in a timely manner to the relevant subregional or regional fisheries management organization or arrangement where one exists. Otherwise, States should cooperate to exchange data either directly or through such other cooperative mechanisms as may be agreed among them;
- (d) States should agree, within the framework of subregional or regional fisheries management organizations or arrangements, or otherwise, on the specification of data and the format in which they are to be provided, in accordance with this Annex and taking into account the nature of the stocks and the fisheries for those stocks in the region. Such organizations or arrangements should request non-members or non-participants to provide data concerning relevant fishing activities by vessels flying their flag;
- (e) such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement; and

(f) scientists of the flag State and from the relevant subregional or regional fisheries management organization or arrangement should analyse the data separately or jointly, as appropriate.

### Article 3

#### Basic fishery data

1. States shall collect and make available to the relevant subregional or regional fisheries management organization or arrangement the following types of data in sufficient detail to facilitate effective stock assessment in accordance with agreed procedures:
  - (a) time series of catch and effort statistics by fishery and fleet;
  - (b) total catch in number, nominal weight, or both, by species (both target and non-target) as is appropriate to each fishery. [Nominal weight is defined by the Food and Agriculture Organization of the United Nations as the live-weight equivalent of the landings];
  - (c) discard statistics, including estimates where necessary, reported as number or nominal weight by species, as is appropriate to each fishery;
  - (d) effort statistics appropriate to each fishing method; and
  - (e) fishing location, date and time fished and other statistics on fishing operations as appropriate.
2. States shall also collect where appropriate and provide to the relevant subregional or regional fisheries management organization or arrangement information to support stock assessment, including:
  - (a) composition of the catch according to length, weight and sex;
  - (b) other biological information supporting stock assessments, such as information on age, growth, recruitment, distribution and stock identity; and
  - (c) other relevant research, including surveys of abundance, biomass surveys, hydro-acoustic surveys, research on environmental factors affecting stock abundance, and oceanographic and ecological studies.

### Article 4

#### Vessel data and information

1. States should collect the following types of vessel-related data for standardizing fleet composition and vessel fishing power and for converting between different measures of effort in the analysis of catch and effort data:
  - (a) vessel identification, flag and port of registry;
  - (b) vessel type;
  - (c) vessel specifications (e.g., material of construction, date built, registered length, gross registered tonnage, power of main engines, hold capacity and catch storage methods); and
  - (d) fishing gear description (e.g., types, gear specifications and quantity).
2. The flag State will collect the following information:
  - (a) navigation and position fixing aids;
  - (b) communication equipment and international radio call sign; and
  - (c) crew size.

### Article 5

#### Reporting

A State shall ensure that vessels flying its flag send to its national fisheries administration and, where agreed, to the relevant subregional or regional fisheries management organization or arrangement, logbook data on catch and effort, including data on fishing operations on the high seas, at sufficiently frequent intervals to meet national requirements and regional and international obligations. Such data shall be transmitted, where necessary, by radio, telex, facsimile or satellite transmission or by other means.

## Article 6

### Data verification

States or, as appropriate, subregional or regional fisheries management organizations or arrangements should establish mechanisms for verifying fishery data, such as:

- (a) position verification through vessel monitoring systems;
- (b) scientific observer programmes to monitor catch, effort, catch composition (target and non-target) and other details of fishing operations;
- (c) vessel trip, landing and transshipment reports; and
- (d) port sampling.

## Article 7

### Data exchange

1. Data collected by flag States must be shared with other flag States and relevant coastal States through appropriate subregional or regional fisheries management organizations or arrangements. Such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement, while maintaining confidentiality of non-aggregated data, and should, to the extent feasible, develop database systems which provide efficient access to data.
2. At the global level, collection and dissemination of data should be effected through the Food and Agriculture Organization of the United Nations. Where a subregional or regional fisheries management organization or arrangement does not exist, that organization may also do the same at the subregional or regional level by arrangement with the States concerned.

**APPENDIX 6: FAO COMPLIANCE AGREEMENT ARTICLE VI EXCHANGE OF INFORMATION**

1. Each Party shall make readily available to FAO the following information with respect to each fishing vessel entered in the record required to be maintained under Article IV:

- (a) name of fishing vessel, registration number, previous names (if known), and port of registry;
- (b) previous flag (if any);
- (c) International Radio Call Sign (if any);
- (d) name and address of owner or owners;
- (e) where and when built;
- (f) type of vessel;
- (g) length.

2. Each Party shall, to the extent practicable, make available to FAO the following additional information with respect to each fishing vessel entered in the record required to be maintained under Article IV:

- (a) name and address of operator (manager) or operators (managers) (if any);
- (b) type of fishing method or methods;
- (c) moulded depth;
- (d) beam;
- (e) gross register tonnage;
- (f) power of main engine or engines.

## APPENDIX 7: UNIVERSITY COURSE OUTLINE FOR AQUACULTURE AND FISHERIES

University of Suriname, Faculty of Technology, third year course option  
Semester 5

Course component	Class	Practical	Study hours	Credit points
Limnology	15	30	90	0.75
Ichthyology	15	30	90	0.75
Aquaculture I	45	30	180	1.25
Animal physiology	30	—	90	0.50
Genetics of aquaculture organisms	15	—	45	0.25
Aquaculture farm construction	30	30	135	1.00
Reproduction of aquaculture organisms	30	30	135	1.00
Invertebrate zoology	15	45	112.5	1.00
Total			877.5	6.5

Semester 6

Course component	Class	Practical	Study hours	Credit points
Marine ecology	15	—	45	0.25
Limnology in aquaculture	30	15	112.5	0.75
Aquaculture 2	60	45	247.5	1.75
Feeding in aquaculture organisms	30	30	135	1.00
Pathology and diseases in aquaculture organisms	15	15	67.5	.50
Quality control and processing of fishery products	30	30	135	1.00
Exploitation and management in fisheries*	30	30	135	1.00
Fish population dynamics	15	—	45	0.25
Total			922.5	6.5

**\* Details of *Exploitation and management in fisheries***

- General aspects of fisheries in the world and in Suriname
- Important fishing methods, fish stocks and fishing grounds
- Population dynamics for fish populations
- Methods and techniques to evaluate fish stocks
- Forecasting of production
- Multifleet and multispecies aspects: interaction between fish stocks and fishing fleets
- Research methods used in Suriname
- Socioeconomic aspects of fisheries
- Fisheries management
- Practical: data collection, data processing, excursions to sea



## **APPENDIX 8: FISHERIES DEPARTMENT JOB DESCRIPTIONS**

1. **DIRECTOR OF FISHERIES**
  - Overall leadership/responsibility of the Fisheries Department
  - With Minister, makes fisheries policies and implements same
  - Prepares reports on fisheries in Suriname and the Region
  - Instructs and advises Heads of Divisions in Fisheries Department
  - Responsible for all decisions arising from Decree C14 and takes necessary actions where needed
  - Ensures that regulations made are effectively implemented
  - Ensures that all tasks for fisheries are consistent with the objectives of agricultural policy
  - Keeps in contact with activities in the Fisheries Sector to ensure that fisheries policies are adhered to
  - Ensures the Fisheries Department is functioning properly through seminars, training workshops, etc.
  - Reports to, and advises the Minister
  
2. **ADMINISTRATIVE OFFICER**
  - Assists in gathering data needed for preparing the budget
  - Responsible for orders and completion of these formalities
  - Keeps daily contacts with different divisions for their orders
  - Controls depot and office supplies
  - Contacts trade companies for prices
  
3. **HEAD OF TECHNICAL SECTION (GOVERNMENT OFFICER)**
  - Maintenance of buildings
  - Head of painting
  - Report to head of the division (Administrator)
  
4. **ASSISTANT TO SECRETARY**
  - Processing of incoming and outgoing mails and documentation
  - Interior and exterior communications of the Director of Fisheries
  - Typing of highly secure correspondence
  - Training of new/young employees
  - Look after correspondence of the Director together with the Secretary
  
5. **SECRETARY**
  - Reports to Director of Fisheries
  - Processing and documentation (incoming and outgoing) mail
  - Typing of highly secure correspondence
  - Look after correspondence of the Director
  - Takes notes of staff meetings
  
6. **ASSISTANT TO SECRETARY (MESSENGER)**
  - Distribution of post (internal and external)
  - Sorting of post and distribution
  - Takes up post at the post box
  - Brings in supplies for the department
  - Reports to the Secretary and Director

7. ASSISTANT TO ADMINISTRATOR (TECHNICAL ASSISTANT)
  - Maintenance of the complex
  - Fills in for the Administrator
  
8. GARDENER (ASSISTANT TO HEAD OF SECURITY AND MAINTANCE OF COMPLEX)
  - Maintenance of complex
  - Keeps complex clean from weed and dirt
  - Responsible for gardening tools
  - Reports to head of administration
  
9. SAME AS DRIVER (HEAD OF TECHNICAL)
  - Carpentering work on building, bridges in Paramaribo and districts
  - Other technical duties
  - Assists and advises Head of Security and Maintenance
  - Reports to Head of Administration
  
10. HEAD OF SECURITY AND MAINTENANCE & SECURITY
  - Control of grounds
  - Control of buildings, bridges, complex
  - Control of telephone desk
  
11. ADMINISTRATIVE OFFICER (INTERNAL AFFAIRS)
  - Registering of orders
  - Controlling of list of attendance and leave
  - Assists the
  - Other administrative duties and resource management
  - Reports to Head of Administration
  
12. HEAD MECHANIC
  - Report to Head of Fisheries and Head of Technical Division
  - Assists Head of Fisheries and Head of Technical Division in buying vehicles
  
13. MAID
  - Sees to cleaning of building in Paramaribo
  - Reports to Head of Technical Division
  
14. ADMINISTRATIVE ASSISTANT (DOCUMENTALIST/SECRETARY)
  - Maintains Bibliography
  - Buying and receiving of books
  - Contacts institutions to get books
  - Sees to it books are returned in good condition
  - Sees to adequate sorting of books in library
  - Other duties as given by Head of Division
  - Reports to Head of Division
  - Assists in the secretariat of Director of Fisheries
  
15. HEAD OF HUMAN RESOURCE AND ADMINISTRATION
  - Acting as Director of Fisheries
  - Control of HRM and financial administration
  - Assists Director in administrative duties and resolving problems

- Responsible for the Human Resource Policy (promotion, salaries, vacancy, etc.)
- Reports to Director of Fisheries
- Trains new employees
- In absence of Director of Fisheries, acts as Director
- Advises and assists Director in policy aspects
- All activities for best functioning of department (monitoring)

#### 16. HEAD OF FINANCE SECTION

- Acts as Head Human Resource and Administration
- Responsible for Department budgeting and control
- Administration of budget funds
- Gathers data for preparing budget
- Controls depot and supplies and buying of supplies
- Instructing employees in Finance Section
- Daily contact with Heads of Divisions for provision of finance information
- Other duties as assigned from time to time

#### 17. HEAD OF AQUACULTURE

- Takes Registry of aquaculture farms in Suriname
- Data collection and analysis of production of aquaculture farms
- Undertakes literature research to improve systems, species, and growth techniques (methods)
- Policy planning: to develop sector plan for period, with other sectoral linkages to foster and maintain in and outside Suriname
- Shares information with the research institutions
- Advises on the development/creation of the law of aquaculture
- Gives information, advice and assistance to farmers who want to begin aquaculture farming
- To give advice to aquaculture farmers and to give training to trainers

#### FUNCTIONAL RESPONSIBILITIES

##### Quality Assurance & Control (Mrs. J. Colli)

*Assisted by:*

*Mr. Karg, M.*

*Mrs. Sewdien, N.*

*Mrs. Janki, S.*

Main activities:

1. Control: landing sites / vessels (hygiene).
2. Transport facilities (info on transport regulations EU to the processing plants)
3. Auditing / Advising / Certificating Processing plants.
4. Supply health certification for the export of fishery products .
5. Interactions with Ministry of Health (monitoring microbiological water and product quality)
6. Interactions with Water Supplier Co. (Monitoring chemical waterquality)
7. Control shippings facilities: Airport/Harbor.

##### Export registration (Mrs. J. Colli)

*Assisted by:*

*Mrs. R. Hasnoe*

*Mrs. K. Sarijan*

*Miss Dundas*

*Mr. Karg, M.*

Main activities:

1. Data entry and analyse on monthly and annually base.

Freshness lab. (Mrs. R. De Boer-Ho)

*Assisted by:*

*Miss Viveye D.(Belgium VVOB)*

*Miss Kromotaroeno, M. .(Chemical analist)*

*Mr. Kaiman, I.*

Main activities:

1. Analysing freshness test of different fish species (organoleptic - and chemical test).
2. Advise the users (Fishermen, processors and others).
3. Annually report.

Micro biological lab.(Mrs. R. De Boer-Ho / Miss Viveye)

*Assisted by:*

*Miss Sewdien, N.(Chemical analist)*

*Miss Janki, S. .(Chemical analist)*

*Miss Kromotaroeno, M. .(Chemical analist)*

Main activities:

1. Training lab personnel in micro biology.
2. Control and monitor: hygiene (by Total Plate Count) in the processing plants.
3. Analyse results, advise the processing plants.

Monitoring programs on: (Mrs. De Boer/ Miss Viveye)

- Biotoxines: Ciguatera, Histamine (scombrototoxin)
- Mercury
- Chemical residue
- Chemical used in aquaculture

Info and training programs for fishermen/processors on: (Mrs. De Boer/ Miss Viveye)

- Biotoxines: Ciguatera, Histamine (scombrototoxin)
- Hygiene
- Freshness of fish/shrimps

License administration of artisanal fisheries (Mr. Drakenstein, Bryan)

*Assisted by: Mrs. Koendjharie*

*Field workers (controllers):*

*Mr. Autar*

*Mr. Satiman, R.*

*Mr. Samoan*

*Mr. Helstone*

*Mr. Rasmali and Mr. Popken(District Commewijne)*

*Mr. Gajadin (District Saramacca)*

*Mr. Abas (District Nickerie)*

*Office:*

*Mrs. Wirjosentono / Mrs. Ashruf*

Main activities:

1. License administration
2. Control based on: compliance with the fishing license regulations

License administration of deepsea finfish and shrimp (inclusive seabob) fisheries

(Mrs. P. Djojokoesomo)

*Field control by: Mr. Drakenstein + 4 field workers*

Main activities:

1. license administration
2. TED's control on the shrimp trawlers.

Development of Small scale Fisheries projects (Mr. Drakenstein)

Extension, training and legal advise (Mr. Drakenstein)

*Assited by Mrs. R. Hasnoe*

Main activities:

1. Organise and coordinate the "Third Quality Management course"
2. Organise computer trainings for Department personnel.
3. Legal advise on Fishery Act, Fish Quality Act and other relevant regulations.

**Position:** Fisheries Communication Officer  
(Proposed)

**Function of the Post:** Mainly responsible for institutional strengthening and capacity building of the Fisherfolk and other stakeholder organization

**Reporting**

**Relationship:** Reports to the Director of Fisheries or any other senior officer he/she designates.

**Qualification and**

**Experience:** At least a first degree in the Social Sciences (Sociology, Anthropology, Political Science, Communication, Management, Social Work) and 3 years experience working in rural communities setting.

- Need to be bilingual (Dutch & English) or at least have a strong knowledge of English, in addition to Dutch.
  
- Previous experience, working with Fishers, or in the marine/fisheries environment will be an asset.

**DUTIES AND RESPONSIBILITIES**

1. Participate in the inaugural National Fisheries Workshop and develop and implement follow-up activities, arising from the recommendations there from, relevant to his/her office.
2. Assist in mobilizing representation at the district and organizational levels, on the National Dialogue Group, coordinating arrangements and providing technical and reporting support, for the inaugural and subsequent quarterly meetings of the Group.
3. Identify relevant issues in fisheries resource conservation, management, development policies, and legal aspects as subject for developing public awareness and education programmes.
4. Organize public awareness programmes and campaign, targeting fisheries, fisherfolk organizations and other community-based stakeholder groups, on issues relating to the sustainable development and management of the fisheries resources.

5. Develop close working relations with the mass media (electronic and print) for the purpose of information dissemination and exchange.
6. Design, distribute and utilize appropriate educational materials such as posters, fact sheets, handouts, brochures, leaflets, comics, booklets, for public awareness and education purposes.
7. Assist the Community Development officer in organizing capacity building activities at the community level.
8. Keep the fisheries Department and the CARICOM Fisheries Unit, Belize, informed on activities planned and implemented on a regular basis; and solicit the participation of the former in implementing the community level activities.
9. Perform any other activities as the Director of Fisheries, or his/her designated representative might assign.

**Position:** Fisheries Community Development Officer  
(Proposed)

**Function of**

**the Post:** Mainly responsible for building and maintaining public and community awareness of critical fisheries resource management, development and policy issues, relating to the national fisheries industry.

**Qualification**

**and Experience:** At least a first degree in the Social Sciences (Sociology, Anthropology, Political Science, Management Communication, Social Work) and 3 years experience working in rural communities setting.

- Need to be bilingual (Dutch & English) or at least have a strong knowledge of English.
- Previous experience, working with fishers or with a communication institution or in the marine/fisheries environment will be an asset.

**DUTIES AND RESPONSIBILITIES**

1. Participate in the inaugural National Fisheries Workshop and develop and implement follow-up activities arising from the recommendations there from, relevant to his/her office.
2. Assist in mobilizing representation at the district and organizational levels, on the National Dialogue Group, co-ordinating arrangements and providing technical and reporting support, for the inaugural and subsequent quarterly meetings of the Group.
3. Identify and mobilize membership and rive functions of existing dormant fisherfolk organizations.
4. Provide support for the formation and maintenance of new fisherfolk organizations.
5. Organize short-term training workshops for fisherfolk organizations in fisheries technology transfer, marine resource conservation management and co-management, aquaculture/mariculture and organizational and financial management.
6. Assist the Communication Officer in organizing and co-ordinating awareness building activities at the community level.
7. Keep the department and the CARICOM Fisheries Unit, Belize, informed on activities planned and implemented on a regular basis,



and solicit the participation of the former, in the implementing of community level activities.

8. Perform any other activities as the Director of Fisheries, or his/her designated representative might assign.

**FISHERIES DIVISION - SURINAME  
NON-MANAGEMENT JOB DESCRIPTION**

<b>J O B</b>	<b>JOB TITLE: (1)</b>  <b>REPORTS TO: (2)</b>	<b>JOB CODE (3)</b> <b>WORK</b> <b>PROGRAMME: (4)</b> <b>UNIT: (5)</b>			
<b>SUMMARY STATEME NT</b>	(7)				
<b>J O B  D U T Y R E S P O N S I B I L I T I E S</b>	<b>DESCRIPTION OF DUTIES (8)</b>				
The above responsibility statements identify specific duties necessary to attain the overall objectives while not precluding the job holder from carrying out other related activities that may be inherent to the job.					
<b>F I E L D</b>	<b>Work Field: (9)</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Machines</u></td> <td style="text-align: center; width: 33%;"><u>Tools Equipment</u></td> <td style="text-align: center; width: 33%;"><u>Work Aids</u></td> </tr> </table>		<u>Machines</u>	<u>Tools Equipment</u>	<u>Work Aids</u>
<u>Machines</u>	<u>Tools Equipment</u>	<u>Work Aids</u>			
<b>W O R K R E Q U I R E M E N T S</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <b>APTITUDES: (10)</b>  <u>COGNITIVE</u>  General Intelligence  Verbal  Numerical </td> <td style="width: 33%; vertical-align: top;"> <u>PERCEPTUAL</u>  Spatial  Form Perception  Clerical Perception </td> <td style="width: 33%; vertical-align: top;"> <u>PHYCHOMOTOR</u>  Motor Co-ordination  Finger Dexterity  Manual Dexterity </td> </tr> </table>		<b>APTITUDES: (10)</b> <u>COGNITIVE</u> General Intelligence Verbal Numerical	<u>PERCEPTUAL</u> Spatial Form Perception Clerical Perception	<u>PHYCHOMOTOR</u> Motor Co-ordination Finger Dexterity Manual Dexterity
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<b>W O R K T R A I T S</b>	<b>INTEREST:</b>  <b>ESSENTIAL EXPERIENCE: (11)</b>				

## DESCRIPTION EVALUATION

<b>POSITION TITLE:</b>					
Q U A L I F I C A T I O N S  P R O F I L E	<b>FACTORS</b>		<b>SUBSTANTIATING DATA</b>	<b>DEGRE</b>	<b>POINTS</b>
	1.	EXPERIENCE			
	2.	EDUCATION			
	3.	TECHNICAL			
	4.	INITIATIVE AND INGENUITY			
	5.	DECISION MAKING			
	6.	ANALYTICAL			
	7.	INTER-PERSONAL/ STAFF RELATIONS			
	8.	FREEDOM TO ACT			
	9.	RESPONSIBILITY FOR MATERIALS, CASH, ETC.			
	10.	SUPERVISION			
	11.	JOB IMPACT			
	12.	WORKING ENVIRONMENT			
<b>LICENCES:</b>				<b>TOTAL</b>	
PREPARED By: _____ DESIG. _____ DATE: _____					
REVIEWED By: _____ DESIG. _____ DATE: _____					
APPROVED BY: _____ DESIG. _____ DATE: _____					
APPROVED BY: _____ DESIG. _____ DATE: _____					

1 – 6. Self explanatory

7. A brief, comprehensive Summary Statement indicating the purpose of the job. This reflects the significant involvement of the incumbent with data, people and/or things in accomplishing the objectives of the Fisheries Department.
8. Each **Duty** of the job is listed and described either in order of importance, as in terms of what, how much and how well it has to be done; in chronological sequence; or in terms of time frames.
9. Each of the items used by the job incumbent is captured in the **WORK FIELD DATA**.

**Work Field Data include organization of the necessary Machines, Tools, Equipment and Work Aids** which are used to carry out specific functions of the job. These are defined as follows:

**MACHINES** are devices which are a combination of mechanical parts with the framework and fastenings to support and connect them, designed to apply a force to work on or move materials or to process data. A machine may be activated by hand or foot power and may use electricity. Examples are adding machines, typewriters, posting machines, combines, tractors.

**TOOLS** are implements which are manipulated to work on or move materials. Included here are all common office, fishing tools etc.

**EQUIPMENT** includes devices such as switchboards and telephones.

**WORKAIDS** are miscellaneous items which cannot be considered as machines, tools or equipment and yet are necessary for carrying out the work. These include things such as manuals.

Examples of **Work Field Data** are shown below:

<b>MACHINES</b>	<b>TOOLS</b>	<b>EQUIPMENT</b>	<b>WORKAIDS</b>
Outboard Engines	Hoe	Telephone	Hose
Conveyor	Cutlass		Log Book
Tractor	Shovel		Manual
Mowing Machine	Hammer		Registers

**WORKFIELD** refers to the specific kind of technical, professional methods and techniques to be applied in relation to the job. The Work Field identification can be further classified into skilled, semi-skilled and un-skilled groupings.

## **SKILLED OCCUPATIONS:**

Skilled occupations are those which specifically relate to high level Scientific, Financial and Management Skills that require a thorough knowledge of the processes involved in the work and allows for a considerable degree of independent judgement.

The identifying characteristics of the skilled worker is exposure to technical/professional training and education programmes. The skilled worker's effort demonstrate originality and ingenuity in performing a wide variety of administrative functions.

The skilled worker group included Scientists, Accountants, Lawyers, Financial Analysts, Programmers and Administrators.

## **SEMI-SKILLED OCCUPATIONS**

**Semi-skilled** occupations require ability of a high order to execute fairly well defined work routines. It involve moving through the various educational and training programmes necessary to achieve skilled status or becoming more skilled in a particular job while not adding new or different skills to the inventory.

**Semi-skilled** workers perform under general supervision and do not exhibit the high degree of independent judgement necessary for the skilled trade. This group enquires extensive practical experience while not requiring the high level of education and technical training as for the skilled workers.

The Semi-skilled group includes most Technical/Fisheries Assistants, Administrative Personnel, Computer Operators and such persons who are responsible for undertaking research activities or verifying, recording and compiling a variety of data.

## **UNSKILLED OCCUPATION**

Unskilled workers follow simple verbal and written instructions. Their jobs usually involve substantial physical effort, requiring minimum education and only basic communication abilities. Supervisors frequently review their work while it is progressing to ensure conformance with performance standards or standard practices as well as to monitor their learning curve in acquiring skills and techniques.

The Unskilled groups consist of Messengers, Janitors and Labourers who handle simple, routine, manual assignments requiring little technical skills but often heavy physical effort to execute the jobs.

Some of the Work Fields which characterize the Fisheries Department environment are classified as follows:

SKILLED

SEMI-SKILLED

UNSKILLED

Accounting – Recording	Computing	Cleaning
Programming	Posting	Gardening
Marketing	Typing	Portering
Researching	Filing	Recording
Administering	Reconciling	Transporting
Investigating	Driving	
Analyzing		
Teaching/Extension		
Planning		

10. The Aptitudes essential to produce the results described in Section 10. **APTITUDES** are specific capacities required of an individual to facilitate the learning of some task or job duty. The kinds and amounts of **Aptitudes** possessed by a person can be determined through the administration of tests which assess the exact amount of the **Aptitude** needed to perform the individual job. However, for this study, **Job Analysis** data is used to determine the kinds and amount of **Aptitude** required for each job.

The **APTITUDES** requirement will not be quantified since we cannot actually see the worker utilizing these capacities on the job. The inherent nature of the **Aptitudes** required will be captured in statements on the “Qualification profile” of the Job Description.

Examples of Aptitude Factors are:

- Cognitive (thought, reasoning, learning)
- Perceptual (Spatial, Form, Clerical)
- Psychomotor (motor coordination, finger dexterity, manual dexterity)

## Fisheries Department - Suriname

### Supervisory Job Description

<b>T H E</b>	<b>J O B</b>	<b>JOB TITLE:</b> (1)	<b>JOB CODE:</b> (2)
		<b>REPORTS TO:</b> (2)	<b>WORK PROGRAMME:</b> (4)
			<b>UNIT:</b> (5)
			<b>COUNTRY:</b> (6)

1. **SUMMARY STATEMENT:** (7)

2. **NATURE AND SCOPE OF JOB:** (8)

3. **PRINCIPAL ORGANIZATIONAL RELATIONSHIPS:** (9)

(The incumbent relates to the following areas/titles internally and externally within the Nature and Scope of the Job)

AREA/TITLE:

RESPONSIBILITY:

INTERNAL:

EXTERNAL:

4. **DUTIES, WORK FIELD, TRAITS:**

<b>JOB TITLE: (1)</b> (13)	<b>JOB CODE NUMBER:</b>
-------------------------------	-------------------------

<b>J O B D E S C R I B E D R E S P O N S I B I L I T I E S</b>	<b>DESCRIPTION OF DUTIES</b>
--	------------------------------

The above responsibility statements identify specific duties necessary to attain the overall objectives while not precluding the job holder from carrying out other related activities that may be inherent to the job.

<b>F I E L D</b>	<b>Work Field: (9)</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center; width: 33%;"><u>Machines</u></td> <td style="text-align: center; width: 33%;"><u>Tools</u> <u>Equipment</u></td> <td style="text-align: center; width: 33%;"><u>Work Aids</u></td> </tr> </table>	<u>Machines</u>	<u>Tools</u> <u>Equipment</u>	<u>Work Aids</u>
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<b>APTITUDES: (10)</b> <u>COGNITIVE</u> General Intelligence Verbal Numerical	<u>PERCEPTUAL</u> Spatial Form Perception Clerical Perception	<u>PHYCHOMOTOR</u> Motor Co-ordination Finger Dexterity Manual Dexterity		
	<b>INTEREST:</b>			
	<b>ESSENTIAL EXPERIENCE: (11)</b>			



**5. Supervisory Job Description Evaluation:**

		<b>JOB TITLE:</b>		<b>JOB CODE NUMBER:</b>		
<b>Q U A L I F I C A T I O N S  P R O F I L E</b>	<b>FACTORS</b>		<b>SUBSTANTIATING DATA</b>		<b>DEGREE</b>	<b>POINTS</b>
	1.	EXPERIENCE				
	2.	EDUCATION				
	3.	TECHNICAL				
	4.	INITIATIVE AND INGENUITY				
	5.	DECISION MAKING				
	6.	ANALYTICAL				
	7.	INTER-PERSONAL/ STAFF RELATIONS				
	8.	FREEDOM TO ACT				
	9.	RESPONSIBILITY FOR MATERIALS, CASH, ETC.				
	10.	SUPERVISION				
	11.	JOB IMPACT				
	12.	WORKING ENVIRONMENT				
LICENCES:				<b>TOTAL</b>		
PREPARED By: _____ DESIG. _____ DATE: _____						
REVIEWED By: _____ DESIG. _____ DATE: _____						
APPROVED BY: _____ DESIG. _____ DATE: _____						
APPROVED BY: _____ DESIG. _____ DATE: _____						

8. **Nature and Scope of the Job** records group-related tasks in a descriptive manner covering the range of activities of the job. For example, it includes all that the Supervisor is expected to do in terms of the co-ordination of manpower and facilities placed under his/her control.
9. The Principal Organizational Relationships pinpoint the important internal and external contacts that are necessary to the incumbent in carrying out the Accountability objectives.

#### 4.4.3 Senior Management Position Description

**The Senior Management Position Description** describes the work performed by the Senior Management Staff of the Fisheries Department. This contains specific details required of each management job and are standardized with regards to the format which is shown in Exhibits and described below:

#### **INTRODUCTION:**

**Section (1) to (9)** follow the same format as explained in the Non-management and Supervisory Job Descriptions, exercise that at (1), the **Title of the Position** will be what is called a working title.

#### **SECTION I: ACCOUNTABILITY OBJECTIVE:**

10: The **Accountability Objective** describes as concisely as possible the overall purpose of the job while establishing the role of the job holder and contribution to be made towards achieving the objective of the Fisheries Department.

**Fisheries Department – Suriname**

**Senior Management position Description**

<b>POSITION TITLE:</b>	<b>(1)</b>	<b>POSITION CODE</b>	<b>(6)</b>
<b>REPORTS TO:</b>	<b>(2)</b>	<b>WORK PROGRAMME:</b>	<b>(7)</b>
<b>AGREED TO BY:</b>	<b>(3)</b>	<b>UNIT:</b>	<b>(8)</b>
<b>APPROVED BY:</b>	<b>(4)</b>		
<b>EFFECTIVE DATE:</b>	<b>(5)</b>		

**I. ACCOUNTABILITY OBJECTIVE: (10)**

**II. DIMENSIONS OF POSITION: (11)**

**A. NATURE AND SCOPE OF THE POSIATION:**

**B. PRINCIPAL ORGANIZATIONAL RELATIONSHIPS:**

(The incumbent relates to the following areas/titles internally and externally within the Nature and Scope of the Job)

AREA/TITLE:

RESPONSIBILITY:

INTERNAL:

EXTERNAL:

**C. PERSONNEL SUPERVISED BY THIS POSITION INCLUDE:**

DIRECTLY

INDIRECTLY

**D. EQUIPMENT, MACHINES, TOOLS AND WORK AIDS CONTROLLED BY POSITION AND USED BY SUBORDINATES INCLUDE THE FOLLOWING:**

EQUIPMENT

MACHINES

TOOLS

WORK AID

**III. PRINCIPAL ACTIVITIES TO ATTAIN ACCOUNTABILITY OBJECTIVES:**

(The following responsibility statements identify specific duties necessary to attain the overall objectives while not precluding the position holder from out other related activities that may be inherent in the position)

**IV. SENIOR MANAGEMENT POSITION EVALUATION:**

<b>JOB TITLE:</b>		<b>JOB CODE NUMBER:</b>		
Q U A L I F I C A T I O N S  P R O F I L E	<b>FACTORS</b>	<b>SUBSTANTIATING DATA</b>	<b>DEGREE</b>	<b>POINTS</b>
	1. EXPERIENCE			
	2. EDUCATION			
	3. TECHNICAL			
	4. INITIATIVE AND INGENUITY			
	5. DECISION MAKING			
	6. ANALYTICAL			
	7. INTER-PERSONAL/ STAFF RELATIONS			
	8. FREEDOM TO ACT			
	9. RESPONSIBILITY FOR MATERIALS, CASH, ETC.			
	10. SUPERVISION			
	11. JOB IMPACT			
	12. WORKING ENVIRONMENT			
LICENCES:			<b>TOTAL</b>	
PREPARED By: _____ DESIG. _____ DATE: _____				
REVIEWED By: _____ DESIG. _____ DATE: _____				
APPROVED BY: _____ DESIG. _____ DATE: _____				
APPROVED BY: _____ DESIG. _____ DATE: _____				

11. The several parts of this section under DIMENSIONS OF POSITION are described as follows:

SECTION II: DIMENSIONS OF POSITION:

**(A). NATURE AND SCOPE OF THE POSITION**

This highlights and describes the activities of employees in relation to the professional, technical and analytical requirements of the job. Short paragraphs with appropriate details are used in describing the main processes of management, that is, writing objectives, planning, organizing, co-ordinating, operating, directing, controlling and motivating staff, as well as indicating the types of decisions to be made regarding the complexity of the job.

**(B). PRINCIPAL ORGANIZATIONAL RELATIONSHIPS:**

This section identifies the salient **Internal** and **External** Relationships that are important to the incumbent in carrying out the **Accountability Objective**.

**(C). PERSONNEL SUPERVISED BY THIS POSITION:**

The level of staff – **Managerial, Supervisory** and **Non-management** – directly and indirectly controlled by the Position are listed in this section. Where appropriate, direct manning levels or ranges are used.

**(D). EQUIPMENT, MACHINES, TOOLS AND WORK-AIDS CONTROLLED BY THIS POSITION AND USED BY SUBORDINATES INCLUDE THE FOLLOWING:**

The resources controlled are detailed in this Section and cover those stated in **Section 9** and **11** of the **Supervisory and Non-Management Job Description Format**.

SECTION III: PRINCIPAL ACTIVITIES TO ATTAIN ACCOUNTABILITY OBJECTIVES:

12. In this section each duty is identified and listed, like the Supervisory and Non-Management duties, in one of the following ways:

- Frequency with which the duties are carried out.
- In Chronological order.
- In order of importance.
- According to the main processes of management.

Each sentence or small paragraph starts with an active verb, expressing the actual responsibility and simplified with examples and other details as is necessary to indicate the purpose of the job and give a lead to setting targets, performance standards and quality objectives.

## APPENDIX 9: STAFFING

### Job Positions

Presently, there are a total of 49 positions in the establishment of the Fisheries Department.

Positions are currently filled as detailed in Table 3.2 below:

JOB POSITION TITLES (Establishment)	NO. OF STAFF IN POSITIONS	COMMENTS GIVEN BY INTERVIEWS
1. Director of Fisheries 2. Administration	1	
<ul style="list-style-type: none"> <li>• Head, Human Resource and Administration</li> <li>• Head, Finance</li> <li>• Administrative Officer</li> <li>• Head, Security and Maintenance</li> <li>• Head, Technical Section</li> <li>• Secretary</li> <li>• Administrative Assistants</li> <li>• Secretarial Assistant</li> <li>• Messenger</li> <li>• Driver</li> <li>• Gardener</li> <li>• Head, Mechanic</li> <li>• Maid</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>1</li> <li>2</li> <li>2</li> <li>2</li> <li>1</li> <li>3</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> <li>1</li> </ul>	
<b>Sub-Total</b>	<b>17</b>	
3. Research and Statistics (Head)	1	
<ul style="list-style-type: none"> <li>• Research - Deputy Head</li> </ul>		Yolanda Babb is acting as Head. Her substantive position is the Officer-in-Charge of the Research Unit - I.e. Deputy Head
<ul style="list-style-type: none"> <li>• Fisheries Information System - Deputy Head</li> </ul>	1	
<ul style="list-style-type: none"> <li>• Biologist (Research)</li> </ul>		Current need for one

		Fisheries Biologist. Two staff currently on training (one is Planning and Extension, and the other in Feeding Nutrition and Disease)
• Data Quality Control - Deputy Head	1	
• Data Processors(all)	3	There are eight data collectors; need for an additional 10 data collectors
• Fisheries research	-	There is need for one officer in research
• Observers	4	
• Enumerators	7	
<b>Sub-Total</b>	<b>17</b>	
4. Extension and Development		There are nine staff presently in Quality Assurance and Control. Need seven more to bring total complement in Q/A and Control to 16 (for Plant Processing and Auditing only)
• License Administrators	2	One of the License Administrators (Drakenstein) performs the Project Development Function.
• Field Assistants (Paramaribo)	4	
• Field Assistants (Out Stations)	4	In respect of Quality Assurance (Landing Sites) need one staff per public landing site declared under the new Act - totalling four additional officers



• Office/Clerical Assistant	1	
• Information/Training	1	
• Legal Advice - Assistant		
• License Administration - deep sea (Field Control)	4	Function of Training/Extension performed by the one of the Licence Administrators.
• Training/Extension	-	
<b>Sub-Total</b>	<b>16</b>	
5. Aquaculture (Head)	1	
Administrative assistant	1	
<b>Total</b>	<b>52</b>	

## APPENDIX 10: CURRENT STAFF SKILLS MATRIX

The current levels of qualifications and skills of incumbent staff are summarized below.

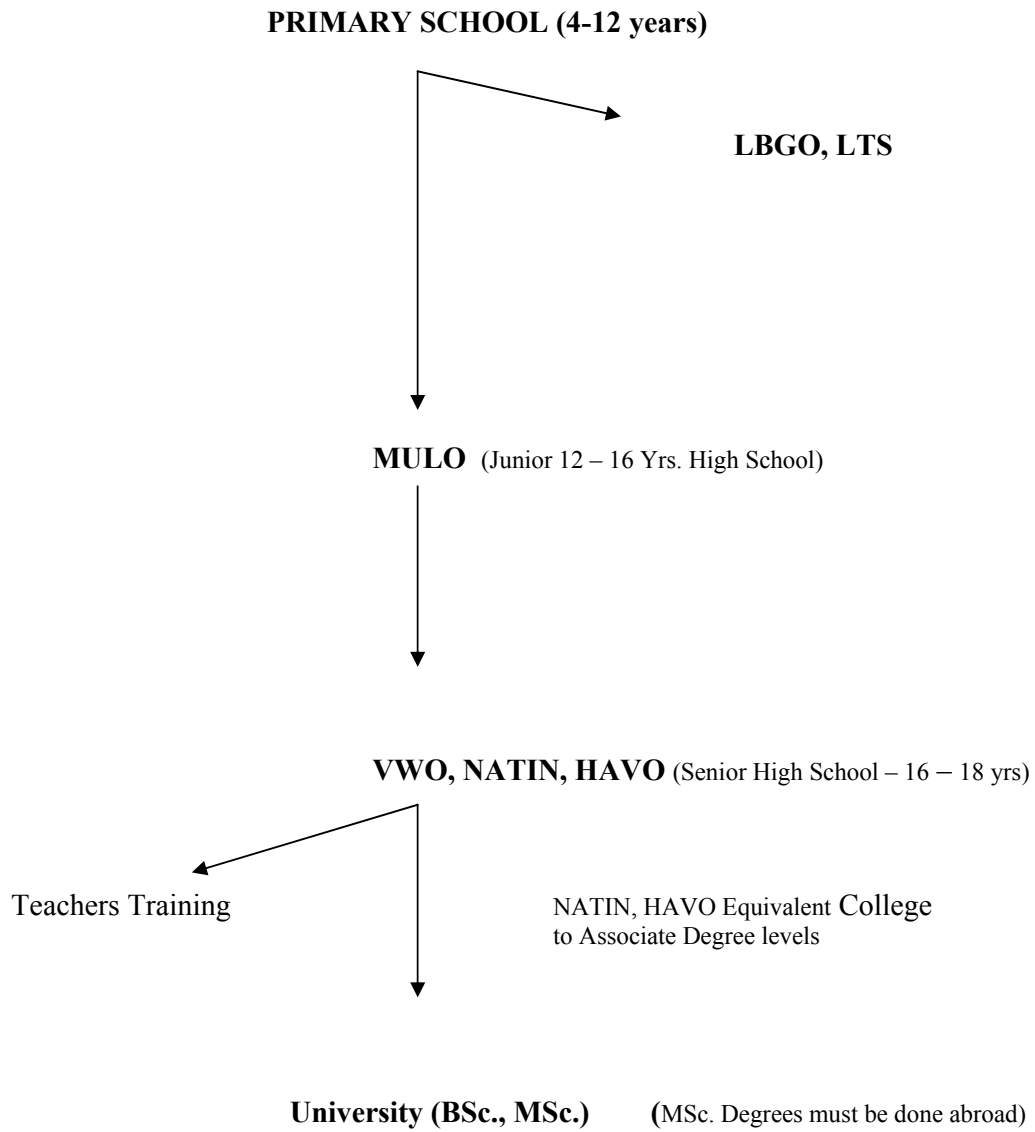
TITLE	NAME	Qualifications/Skills/Placement in Pay Grade
1. Director of Fisheries	Rene Lieveld	Masters degree in Plant Phytology. Livestock, Food and Aquaculture, farmer. Experience in management of Fisheries
2. Administration		
• Head, Human	A.F.R Kenswil (retired) R. Asraf BSc of Art in Human Resource	Lic. In Human Resource Management and Finance and Administration - VAAO, IMEAO, VAAO, Training in Public Administration
• Head, Finance	C.C. Schet	Training in Public Administration MULO (Teachers Diploma)
• Administrative Officer (HR)	Hr. Modiwirjo	Primary School
• Administrative Officer (Finance)	Mrs C Witterberg M. Pawirotaroeno	IMEAO
• Head, Security and Maintenance Head of Telephone		LTS
Operation Assistants	R. Muringen J. Landolf	
• Head, Technical Section	Hr. Amier Ali J.Edhart E. Davids Hr. M Asruf	LTS LTS, Agriculture experience LTS
• Secretary	M? M. Soekhlal	IMEAO ( passed away) Lotus 123 and Word 1997
• Administrative Assistants	A. Seetal S.D. Sewbarath Misser	BSc. of Art, Human Resource LBGO Diploma, Experience in
• Messenger	Hr. J. Atmokarijo	Primary School

<ul style="list-style-type: none"> <li>• Driver</li>   <li>• Gardner</li>   <li>• Head, Mechanic</li> <li>• Maid/ House keepers</li> </ul>	<p>D. Marlan S. Martoredjo I. Ramadhin</p> <p>D. Patjai Hr. P Nairain Lagadeu</p> <p>Hr. M Marisidin</p> <p>S. Sterodikoro</p> <p>Mrs M. Blijd</p> <p>G. Panka M. Grant</p>	<p>Primary School</p> <p>LTS, MTS</p>
<p>3. Research and Statistics, Head</p> <ul style="list-style-type: none"> <li>• Research - Deputy Head</li> <li>• Information System - Head</li> </ul>	<p>Yolanda Babb-Echteld</p> <p>Not filled</p> <p>Thania Chin-A-Lin</p>	<p>Technical College level qualification (equivalent to BSc.) Over 15 years experience in tropical fisheries</p> <p>Now completing (Graduating) with BSc, in Animal Husbandry and Forestry. Trained in</p>
<p>Head</p> <ul style="list-style-type: none"> <li>• Data Quality Control -</li> <li>• Data Processors</li>   <li>• Observers</li> </ul>	<p>Dhr. M. Ijsspol</p> <p>M. Ori</p> <p>L. Abas</p> <p>M. Rachman</p>	<p>Fisheries Management and population dynamics, Over 2 years experience in Fisheries</p> <p>VVO. Trained in Quality Control Management. Three years relevant experience</p> <p>Trained in Seaman, Teachers Scholl, Since 1982 at Fisheries Department</p> <p>MULO. Over 20 years experience in Fisheries</p> <p>LBGO. Since 1998 with Fisheries Department, Experience with Fish Processing</p> <p>Sea Captain, Experienced Seaman</p>

<ul style="list-style-type: none"> <li>Enumerators</li> </ul> <p>4. Extension and Development - Head</p> <p><u>Export Registration - Plant Processing</u></p> <ul style="list-style-type: none"> <li>Assistants</li> </ul>	<p>Ezechiels</p> <p>E. Sabajo</p> <p>Acton Winter</p> <p>A. Hoepel</p> <p>Mangoenkarijo Samodhi</p> <p>Saturrinus</p> <p>Dipotiko</p> <p>Kasanmoenadi</p> <p>R.Manbodh</p> <p>Mrs. Colli Juliette</p> <p>R. Hasnoe</p> <p>K. Saridjan</p> <p>Ms. Dunas</p>	<p>Worker Experienced Seaman</p> <p>Assistant Captain Experienced Seaman Only 5 years at Fisheries</p> <p>LBGO. Trained in Forest Inspection, Head of Enumerators 20 yrs experience</p> <p>8 years experience</p> <p>Captain, Navigator, 15 years experience Almost completed IMEO, Forestry Inspector, 12 years experience in Fisheries</p> <p>MULO, 12 years experience in Fisheries LTS, MTS 2 years in Fisheries</p> <p>NATIN. 15 years experience in Quality Control</p> <p>VWO ( not any more) ULO ( use to be Cashier) VWO ( has left)</p>
<p>Audit ( Quality Managers</p> <p><u>Fisheries Lab - Supervisor</u></p> <ul style="list-style-type: none"> <li>Assistants</li> </ul> <p><u>Microbiological Lab</u></p> <ul style="list-style-type: none"> <li>Supervisor</li> <li>(Chemical Analyst)</li> </ul>	<p>M. Karg</p> <p>Ch. Ramawadh</p> <p>R. De Boer-Ho</p> <p>D. Viveye</p> <p>Kromotaroeno Kaiman</p> <p>Boer/Viveye</p> <p>N. Sewdien</p>	<p>HAVO plus quality Management, one year course</p> <p>One year Quality Management course</p> <p>One year Quality Management course</p> <p>MSc. Food Technology ( Belgian expert)</p> <p>NATIN NATIN</p> <p>-</p> <p>NATIN</p>

Assistants	S. Janki	NATIN
<u>Artisanal Fisheries</u>		
<ul style="list-style-type: none"> <li>Licence Administrator &amp; Legal advisor</li> </ul>	Bryan Draken-Stein	BSC. in Public Administration 2 years experience in Fisheries
<ul style="list-style-type: none"> <li>Field Assistants</li> </ul>	Autar Satiman Samoen	
<ul style="list-style-type: none"> <li>Field Assistants outstations at: <ul style="list-style-type: none"> <li>- Commewijine</li> <li>- Sariamacia</li> <li>- Nickerie</li> </ul> </li> </ul>	Rasmali, &Pophen Gjadin Noredjo,& Doelrakim	
<ul style="list-style-type: none"> <li>Office/Clerical Assistant</li> </ul>		
License Administrator - Deep Sea, Finfish and Shrimp	P. Djojokoesomo	
5. Aquaculture – Head	Mr. Johnny Debipersad	MSc. Aquaculture
Administrative Assistant	R. Jhari S. Breinburg	BSc. Animal Science

**Note:** To aid understanding of acronyms and in educational qualification Above, a simple flowchart below shall elucidate the levels of attainment of interviewees (staff). See below:



## APPENDIX 11: GOVERNMENT AND PROGRAMME BUDGETS

### MINISTRY BUDGET(' 000 Surinamese Guilders)

ITEM	2000	1999
<b>Normal Services</b>		
Salaries and Wages	2,376,126	1,686,355
Social Security etc	141,192	142,000
Other Goods and Services	815,902	520,098
Subsidies for Parastatals	299,606	133,000
Home for the Elderly	248,133	120,445
Contributions to International Organisations	90,000	45,000
Maintenance of Large Infrastructure and Equipment	1,029,041	562,202
<b>Sub-total</b>	<b>5,000,000</b>	<b>3,209,100</b>
<b>Extraordinary Services</b>		
Special Expenditure	17,000	17,000
<b>Sub-total</b>	<b>5,017,000</b>	<b>3,226,100</b>
Development Services (eg. Project Formulation)	1,000,000	1,000,000
<b>Grand Total</b>	<b>6,017,000</b>	<b>4,226,100</b>

Fisheries Department Budget (' 000 Surinamese Guilders)		
	Approved Estimates	
ITEM	2000	1999
<b>Personnel Costs</b>		
Salaries (base)	98,694,000	93,858,000
Probation	12,000,000	11,916,000
Overtime	3,000,000	3,000,000
Clothing allce	806,000	806,000
Away From Home-base	121,000	121,000
Representation (refreshments)	450,000	450,000
Cashier allce	8,000	8,000
Vacation allce	7,896,000	7,509,000
Field allce	100,000	100,000
Personal allce (senior staff)	900,000	900,000
Responsibility allce	155,000	103,000
Child allce	449,000	449,000
Compensation for Devaluation	25,920,000	-
Inflation Correction	19,739,000	-
<b>Sub-total</b>	<b>170,238,000</b>	<b>119,220,000</b>
<b>Other Expenditure of Goods and Services</b>		
Utilities	9,000,000	3,000,000
Small Maintenance and Cleaning of Buildings	5,000,000	2,000,000
Maintenance and Supplies for Land and Water Transport	6,000,000	5,000,000
Rental of Cars and Boats	3,000,000	500,000
Transportation to Remote Areas	2,500,000	1,000,000
Transportation and hotel Overnight	4,000,000	1,000,000
Travel using a Personal Vehicle	2,000,000	1,000,000
Fuel and Lubricants	15,000,000	5,000,000
Tools	2,000,000	1,500,000

Basic Materials for Construction	1,000,000	500,000
Lab Equipment	5,000,000	2,000,000
Research Costs	7,000,000	3,000,000
Training (local only)	500,000	100,000
Exhibitions and Fairs	3,000,000	1,000,000
<b>Sub-total</b>	<b>65,000,000</b>	<b>26,600,000</b>
<b>Capital Maintenance and Purchases</b>		
Construction and Technical Materials	3,000,000	2,000,000
Instruments	2,000,000	1,000,000
Boats and Vehicles	5,000,000	4,000,000
Maintenance of bldgs., roads, bridges, canals, mach.	4,000,000	4,000,000
<b>Sub-total</b>	<b>14,000,000</b>	<b>11,000,000</b>
<b>GRAND TOTAL</b>	<b>249,238,000</b>	<b>156,820,000</b>

**Financial year Oct 1 to Sep 30**

Exchange rate US\$1=x Surinamese guilders



**APPENDIX 12: ICRAFDP (FISHERIES COMPONENT BUDGET)**

<b>WBS #</b>	<b>ACTIVITY</b>	<b>BUDGET</b>
WBS300	FISHERIES DATA AND INFORMATION SYSTEM	82,000.00
WBS400	FISHERIES RESOURCE ASSESSMENT	45,000.00
WBS 500	FISHERIES MANAGEMENT	60,000.00
WBS520	REGIONAL FISHERIES MANAGEMENT	11,000.00
WBS530	COMMUNITY INVOLVEMENT AND PUBLIC AWARENESS	70,000.00
WBS 540	HUMAN RESOURCE DEVELOPMENT (TRAINING)	40,000.00
WBS 550	SURVEILLANCE AND ENFORCEMENT	3,500.00
WBS 560	POST-HARVEST HANDLING PROCESSING AND MARKETING	3,500.00
WBS 570	FISHERIES DEVELOPMENT PLANNING	10,000.00
	<b>TOTAL</b>	<b>\$325,000.00</b>