

FISHCODE/MANAGEMENT

REPORT OF NATIONAL WORKSHOP ON SHRIMP AND GROUND FISH FISHERIES OF THE BRAZIL-GUIANAS SHELF

Mon Repos, Guyana, 27-28 April 2000



FOOD AND AGRICULTURE ORGANIZATION
OF THE UNITED NATIONS

ROME, OCTOBER 2000

FISHCODE/MANAGEMENT

**FAO/NORWAY PROGRAMME OF ASSISTANCE TO DEVELOPING COUNTRIES
FOR THE IMPLEMENTATION OF THE CODE OF CONDUCT FOR RESPONSIBLE
FISHERIES**

**SUB-PROGRAMME F: ASSISTANCE TO DEVELOPING COUNTRIES FOR
IMPROVING THE PROVISION OF SCIENTIFIC ADVICE FOR FISHERIES
MANAGEMENT**

**REPORT OF NATIONAL WORKSHOP ON SHRIMP AND
GROUNDFISH FISHERIES OF THE BRAZIL-GUIANAS
SHELF**

**Mon Repos, Guyana
27-28 APRIL 2000**

by

**Bissar Chakalall
Regional Fisheries Officer
and
Juan-Carlos Seijo
FAO Consultant**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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Chakalall, B.; Seijo, J.C.
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the Brazil-Guianas shelf, Mon Repos, Guyana, 27-28 April 2000

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INTRODUCTION

The Workshop was organised within the framework of the FAO/WECAFC *ad hoc* Working Group on shrimp and groundfish fisheries of the Brazil-Guianas Shelf that was established in 1984 at the recommendation of the WECAF Commission, given the nature and characteristics of the fisheries resources in this region. The Group has been meeting yearly since 1996 to undertake stock assessments of the main commercial species of shrimp and groundfish. One of the main objectives was to use the results of these assessments to investigate alternative options for managing these fisheries and to provide scientific advice for management. This series of stock assessment workshops were facilitated by FAO, through its Regular Programme and inter-regional Projects GCP/INT/575/DEN – “Training in Tropical Fish Stock Assessment” and GCP/INT/648/NOR- “Assistance to Developing Countries for the Implementation of the Code of Conduct for Responsible Fisheries” and CFRAMP (CARICOM Fisheries Resources Assessment and Management Programme).

The fisheries directors of the countries of the Brazil-Guianas shelf, (Brazil, French Guiana, Guyana, Suriname, Trinidad and Tobago and Venezuela) met in June 1999 in Belem, Brazil, and discussed the work of the *ad hoc* Working Group, with emphasis on their national jurisdictions. The fisheries directors, in accepting the preliminary results of the stock assessments, recommended the dissemination of these results to the stakeholders in each participating country through national workshops.

The main objectives of the workshop were to:

- Stimulate and encourage the participation of stakeholders, especially in the industry, in management of the shrimp and groundfish fisheries of the Brazil-Guianas region, through the work of the Fisheries Department and the FAO/WECAFC *ad hoc* Working Group of the Brazil-Guianas Shelf (Article 6.16 of the Code of Conduct for Responsible Fisheries pertaining to the involvement of resource users in the conservation and management of fishery resources, refers);
- Initiate discussions on partnership arrangements between the Fisheries Department and the industry stakeholders; and
- Disseminate the results of the stock assessment work of the Fisheries Department undertaken through the FAO/WECAFC *ad hoc* Working Group on shrimp and groundfish resources on the Brazil-Guianas shelf and discuss its implications for management.

OPENING SESSION

The Workshop was held at the National Agricultural Research Institute (NARI), Mon Repos, East Coast, Demerara, 27-28 April 2000.

Sixty participants from the fisheries sector and government agencies attended the workshop. Participants included fishers, owners of fishing vessels, and representatives of fishermen co-operative societies, trawler owners’ associations and the Guyana Defence Force Coast Guard. The list of participants is attached as Annex A.

The Permanent Secretary, Ministry of Fisheries, Crops and Livestock, Mr. Bowhan Balkaran, presided over the opening session. In welcoming the participants, he emphasised that the

Government of Guyana was committed to sustainable fisheries through management and conservation of the resources.

In his brief remarks, the Regional Fisheries Officer, Mr. Bisessar Chakalall, greeted the participants on behalf of the Director-General of FAO. He mentioned that the results of the stock assessments carried out by the Fisheries Department over the past four years, with technical assistance from FAO and CFRAMP, will be presented to the stakeholders during the workshop to obtain their feedback and to initiate a process of consultation with the stakeholders, which, hopefully could become a regular event. This exercise could lead to a partnership arrangement with the stakeholders for the management of the fisheries resources in the region. He said that actual data collected by the countries of the region was used in stock assessment models for the first time in the region and noted that the technical assistance being provided by the FAO was in keeping with various international fisheries agreements, particularly the Code of Conduct for Responsible Fisheries.

The Resource Assessment Unit Leader/Biologist, Mr. Terrence Phillips, in his brief remarks, extended greetings to the participants from the Project Manager and Scientific Director of CRFAMP, and acknowledged the contributions of CIDA and CARICOM states to the CFRAMP Programme. He pointed out that CFRAMP's goal was to promote the management and conservation of the fisheries resources of the CARICOM countries to permit the exploitation of these resources on a sustainable basis. He mentioned that CFRAMP had been providing training for fisheries personnel as well as assisting fisheries departments to improve their data collection and management systems, undertake assessment of fish stocks, and develop fisheries management plans. He noted the gains from the FAO/CFRAMP workshops and emphasised the need to maintain the data collection systems. He pointed out that the national workshop was aimed at disseminating the results of the shrimp and groundfish assessments as well as initiating discussions between the fisheries administration and the stakeholders.

The Hon. Minister of Fisheries, Crops and Livestock, Mr. Satyadeow Sawh, in his address thanked the fishers for attending and the FAO for the technical assistance it has been providing to Guyana over the years, which currently include assistance in aquaculture and the assessment of fish stocks through the work of the WECAFC ad hoc working Group on Shrimp and Groundfish fisheries of the Brazil-Guianas Shelf. He also acknowledged the contribution of CFRAMP to promote the management of marine fisheries. Mr. Sawh outlined a number of activities and measures, such as the introduction of TEDs and the observer programme, that were being undertaken by the Department of Fisheries, that should lead to the conservation of the fisheries resources. He emphasised the need for regional co-operation in the management of the fisheries resources of the Brazil-Guianas shelf because of the nature and characteristics of these resources. The Minister mentioned the establishment of a Fisheries Advisory Committee to the Ministry of Fisheries, Crops and Livestock and stressed the need for partnership arrangements with the industry for sustainable utilisation of these fisheries resources. In this regard, he indicated that workshops such as this should be held regularly.

WORKSHOP PROGRAMME

The Workshop Programme is attached as Annex A.

STATUS OF GROUND FISH RESOURCES AND IMPLICATIONS FOR MANAGEMENT

Ms. Angela Hackett presented a summary of the status of groundfish resources, citing various research surveys carried out over the years. The general indication was that some fish stocks were being exploited at or above sustainable levels.

Ms. Hackett presented the results of stock assessments conducted for *Macrodon ancylodon* (“bangamary”) and *Nebris microps* (“butterfish”) using length frequency data obtained from the artisanal fishing fleet. The results showed that the fishing mortalities for these two species were in excess of the desirable target levels. Therefore, the long-term sustainability of these stocks was under threat. It was recommended that groundfish stocks should be continuously monitored and stock assessments and bio-economic analyses of groundfish stocks undertaken in order to decide on appropriate management measures.

STATUS OF SHRIMP RESOURCES AND IMPLICATIONS FOR MANAGEMENT

Mr. Terrence Phillips explained that the results of the application of length based cohort analysis techniques and age-structured sequential population analysis on three species of penaeid shrimp in the Guyana Shrimp fishery. He pointed out that the production statistics indicated that the total annual production had been falling.

Based on the results of the assessments, both *P. brasiliensis* and *P. notialis* showed clear trends of decreasing stock abundance for both males and females for the period studied. For 1981 to 1997, *P. brasiliensis*, the most abundant species in the Guyana penaeid shrimp landings (40 – 60 %), showed a clear downward trend in both males and females, with this trend becoming much more significant in the 1990s. One of the major aspects of this species was the loss of recruitment peaks for both males and females in the 1990s.

It was pointed out that the assessments indicated full exploitation for *P. notialis* and *P. subtilis* and overexploitation for *P. brasiliensis*. It was recommended that the levels of fishing effort in the penaeid shrimp be monitored very carefully. There was a general downward trend in the abundance of *P. subtilis* and *P. brasiliensis*. However, those trends were more conspicuous during the late 1980s and throughout the 1990s. It was not clear what was the origin of such trends, but it was mentioned that they might be due to a combination of sustained environmental changes and exploitation. Also, it was recommended that there should be joint analyses and assessments of the *P. brasiliensis* stocks of Guyana, Suriname and French Guiana, because of the lateral west to east migration of this species off the coast of the three countries.

SYNTHESIS OF THE BIO-ECONOMIC ASSESSMENTS

Dr. Juan Carlos Seijo noted that the bio-economic assessments undertaken during the 1999 Shrimp and Groundfish workshop in Belem, Brazil, was designed to answer management questions. Some of the management questions identified during the preparatory missions were the following: How to sustain yield, food security, and employment of artisanal fishermen targeting groundfish that was harvested incidentally by the shrimp fleet of the region? What was the optimum effort level for multi-species and multi-fleet fisheries? and, What is the

effect of recognising alternative states of nature in critical biological and economical parameters and functions?

Some of the progress achieved to date involved the following: (i) economic data collection for shrimp and groundfish fisheries, which was absent prior to 1999, (ii) design of a dynamic bio-economic model for the technologically interdependent shrimp (*Penaeus spp.*) and seabob (*Xiphopenaeus kroyeri*) fisheries, (iii) Incorporating seasonality in the analysis of fisheries dealing with short-lived species.

THE SHRIMP FISHERY OF GUYANA – PERSPECTIVES OF STAKEHOLDERS

Mr. L. Ramahlo presented a description of the seabob fishery. He indicated that there were approximately 60 boats currently targeting seabob (*Xiphopenaeus kroyeri*) fishing an average of 7-8 days per trip, with a tendency towards 8-9 fishing days per trip. Catch seems to be improving as a result of technological improvements (i.e. GPS, fish finding devices, etc.). Freezing on board was one way to ensure the quality of seabob. For quality control reasons, fleet/plant owners had the policy of not harvesting more than 28,000 pounds per trip. The seabob fishery was a vibrant and developing industry that started in 1985. Shrimp trawlers were shifting their effort to the seabob fishery mainly for economic reasons. This relative small crustacean was caught at sizes as large as 90 to 110 per pound, but the average size caught was 300-500 per pound. Seabob were peeled and processed on shore. Conflicts seemed to be arising between seabob fleets and artisanal vessels targeting fish that was caught as bycatch by seabob vessels. Concerning bycatch, the hypothesis was that bycatch from shrimp trawling was significantly larger than the bycatch of vessels fishing seabob.

In terms of management, consideration was given to the implementation of closed seasons and closed areas. It was recognised that research was needed to determine the length of the closed season and the areas to be closed. Studies were also needed to determine the optimum closed season and optimum area to be closed. One management strategy that was suggested was to prohibit trawling for seabob from the 15 fathom isobath shorewards.

Dr. J. Da Silva in his presentation identified issues, such as ownership of fishing vessels, licensing, and TEDs (Turtle Exclusion Devices), which were of growing global interest. He stressed that quality control systems in the processing of shrimp was also a fundamental aspect of the industry that required attention. Dr. Da Silva also pointed out the potential role of aquaculture in increasing fish production. The development of a GIS (Geographic Information System) for the fisheries of Guyana was suggested in order to optimise resource use, improve on management and to aid in monitoring and enforcement.

STATUS OF GROUND FISH FISHERIES OF GUYANA – PERSPECTIVES OF STAKEHOLDERS

Mr. Mohamed Khan, President of the Union of Artisanal Fishermen Co-operative Societies, identified a set of problems pertaining to groundfish fisheries in Guyana. These include:

- (i) Conflicts among fishing fleets (fishing gear interaction);
- (ii) Illegal trade in fish and fish products (sale at sea);
- (iii) Outdated fisheries statistics especially for the artisanal and small-scale fisheries;

- (iv) Inadequate training of technical personnel of the Fisheries Department;
- (v) Lack of research programs to support the development and sustainability of the fisheries sector;
- (vi) Lack of training for effective enforcement and safety of fishing;
- (vii) Need for new legislation;
- (viii) Availability of credit; and
- (ix) Illegal fishing by foreign vessels.

Mr. Rajkumar pointed out that an additional problem related to authorised fishing by locally chartered foreign fishing vessels was that they were not subjected to the same requirements and policing as the domestic fleets.

CURRENT MANAGEMENT MEASURES FOR SHRIMP AND GROUND FISH FISHERIES. POSSIBLE CHANGES TO MANAGEMENT MEASURES AND THEIR IMPLICATIONS.

Mr. Shawn Wiggins presented a summary of current management measures for shrimp and groundfish fisheries and outlined possible changes and their implications. The penaeid shrimp and seabob were limited entry fisheries, while fish trawling and finfish fisheries were open access. Consideration was being given to prohibiting trawling for penaeid shrimp from the 18 fathom isobath shoreward and establishing closed seasons. Mr. Wiggins indicated that the current limit of 100 shrimp trawling vessels needs to be reviewed urgently. Concerning seabob, the limited entry fixed fleet approach should be maintained until research results indicate evidence for a possible expansion in effort.

For fin fish trawling, it was suggested that a limited entry approach and closed areas to avoid conflicts with the artisanal fishery be defined and implemented.

For the artisanal fishery, currently under open access, it was suggested to limit the number of Chinese Seine (fyke net) vessels to the current number, and to remove financial subsidies that were encouraging entry to this fishery. It was also suggested to limit the number of Chinese Seine nets per vessel.

Concerning the cadell line (artisanal longline) fishery it was suggested that its development and expansion be encouraged with limitations on the size of the hook utilised to prevent juveniles from being caught.

The nylon gillnet fishery seemed to be damaging the resource because of the size of mesh used. Controls should be instituted to mitigate the recruitment overfishing problem generated by this use of small mesh size.

It was mentioned that the shark fishery required monitoring and study to prevent overexploitation and harvesting of juvenile sharks, that were sometimes caught in the gillnet and cadell fisheries as well.

ISSUES IDENTIFIED AND WORKING GROUPS

The following issues were identified from the lively discussions and intense exchange of ideas that took place during the day. The participants agreed to group these issues as follows for discussion in working groups.

GROUP 1

- Limit to licences, effort and fleet size.
- Closed Seasons/Areas.
- Observer Programme.

GROUP 2

- Illegal, Unregulated, Unreported fishing.
- Foreign fishing.
- Monitoring, Control and Surveillance. Enforcement.
- Technology (GIS, GPS, etc).

GROUP 3

- Bycatch utilisation and reduction.
- Bycatch reduction devices – TEDs.
- Conflicts:
 - Artisanal/Industrial.

GROUP 4

Fishery Administration

- Fishery Policy
- Training.
- Legislation.
- Research.
- Institutional Strengthening.
- Fisheries Institute/Commission.
- Fisheries Fund.
- Quality Assurance.

Participants were requested to join a working group of their choice and to select a chairperson, and rapporteur who would present the report of the group at the plenary session.

REPORT OF WORKING GROUPS

Group 1

Dexter Gordon
Rudolph Burnett
Leslie Romalho
Ray Adams
Roderick Daniels
Claudine Hazel
Odeea Bevenuti

Penaeid shrimp and Seabob Fisheries

The Group suggested a limit to licences at the current level for the shrimp and seabob fisheries as well as a limit to the number and capacity of processing plants. A cautious approach was suggested, in that no more seabob licences should be issued until the corresponding bio-economic assessments were undertaken. Concerning the establishing of closed seasons, it was pointed out that the spawning season needs to be verified for the main shrimp species. A clear definition of nursery areas was a prerequisite for determining specific areas to be closed. It was considered fundamental to identify and demarcate current fishing areas, before establishing a closed area strategy.

Red Snapper Fishery

The group indicated that more scientific information and fishery data was needed to aid decision-making by resource users as well as resource managers. A justification of the current licence scheme (i.e. 23 vessels using hook and line and 17 using traps) was essential before any expansion of this fishery was contemplated. It was pointed out that traps harvest more fish but catch more juveniles, while the hooks (with the proper hook size) harvest larger fish. The group noted that better communication between the Fishery Department and stakeholders was essential for sustaining this relatively new fishery that can be easily over-exploited. Given that this fishery was still in a developing stage, it was suggested that controls be designed concerning fleet size, standardisation of gear and effort (i.e. mesh size for traps), and fishing seasons.

An observer programme, requiring more involvement of the fishing industry, was necessary to complement data collection for proper parameter estimation and fishery analysis. This should lead to sound scientific advice for management purposes.

Group 2

Mohammed Khan
John Flores
Haniff Juman
J. Daniels
Shawn Wiggins
C.S. Ramchand
Premsukh
H. Ramnarine
Rolan Persaud

Illegal, Unregulated, Unreported fishing

The Group agreed that efforts to prevent illegal fishing should be undertaken through: (i) educational programmes for fishers (ii) licensing requirements and regulations, (iii) enforcement of fisheries legislation (iv) improving the monitoring and enforcement capacity of the Coast Guard of Guyana Defence Force (v) design and establishment of adequate fisheries information systems, and (vi) increase current penalties in order to reduce the propensity to violate regulations. A percentage of the value of the catch and vessel was suggested as a fair means of determining penalties.

Foreign fishing

Concerning foreign fishing (defined as/or locally chartered foreign vessels fishing in Guyana), the group suggested that all catch obtained within the EEZ should be landed in Guyana. It was also pointed out that all fishery agreements should consider the local needs and context of the fisheries sector in that local fishers should not be disadvantaged. The Group suggested that common criteria should be developed and applied to all fishing agreements.

Monitoring, Control, Surveillance/Enforcement

The group agreed that the introduction of appropriate surveillance technology and equipment was highly necessary to enforce fishing regulations and for monitoring control and surveillance. It was agreed that the fishing industry could assist by providing intelligence information to the Coast Guard. The Coast Guard will then have a good database for planning and patrolling the EEZ. It was pointed out that the Coast Guard did not have any patrol vessels at the moment and that it was currently using a vessel loaned to it by a fishing company. Their capacity and capability should be increased.

Technology (GIS, GPS, etc)

It was recognised that even though the establishment of Geographic Information Systems (GIS) could be very useful for research and management purposes, it should be planned for the mid term. It was emphasised, however that basic GPS, echo sounders, and mapping devices should be utilised by industrial vessels to aid in compliance to fishery management regulations.

Group 3

L. Walcott
E. Thom
A. Kitt
M. Baptiste
B. Gibbs
C. C. Mohabir
D. M. Ramkelawan
E. Thania Chin-A-Lin
F. V. Roopchand

By-catch

The Group felt that shrimp trawlers operating shorewards of the 18 fathom isobath cause damage to juveniles of fish species targeted by the finfish boats. It was suggested by the group that regulations should be changed to ensure that trawlers do not operate within this area, which should be reserved for the artisanal fishery.

The use of TEDs has been mandated by the US to ensure that endangered sea turtles caught at sea be allowed to escape without being drowned in the nets of shrimp trawlers. It was the view that in general fishing technology was moving in the direction of improving selectivity and the design of by-catch reducing devices (BRDs) to reduce the incidental catch of finfish. The Group was of the opinion that BRDs would also be mandated in the future.

Conflicts - Artisanal/Industrial

The Group suggested that the area demarcated by the 18 fathom isobath shorewards should be reserved for artisanal and small-scale fisheries in order to minimise conflicts between the industrial (mainly shrimp trawlers) and artisanal fleets. It was felt that the industrial fleet operating in this area catch large quantities of juveniles as by-catch which was detrimental to the fishery.

Group 4

Joshua Da Silva
Roger Hinckson
Jerry Burnett
J. Jafferly
B. Dey
J. Glen
A. Hackett
R. Allen

The Group reported that:

Policy

Government and industry should work together in the development of adequate policies for the fisheries sector (sustainable harvesting; post harvest handling, processing and marketing; quality assurance, management regulations etc).

Training

Government and industry personnel should be trained. The Group suggested that training should be provided to fishery personnel at the graduate level. A fishery programme at the University of Guyana would be very useful to strengthen the sustainability of the fisheries sector. Alternatively, an institute similar to that of the Caribbean Fishery Training and Development Institute in Trinidad and Tobago could be established.

Legislation

Government needs to work together with the fisheries sector in devising and implementing fishery regulations.

Research

The Group agreed that research was necessary to aid management decision-making and identified the need to recruit highly qualified and experienced fishery scientists to do stock assessment and fishery analysis. The results should be incorporated into fishery management plans and should be disseminated to all stakeholders to aid in policy formulation for management.

Institutional strengthening

Institutional strengthening, through training and regional co-operation, was considered a priority for the fisheries sector. The Group supported regional co-operation in research and management as being pursued by the WECAFC ad hoc Working Group and felt that emphasis should be placed on the accomplishment of agreed intersessional tasks.

Fisheries Institute/Commission

The Group suggested the re-organisation of the Fisheries Department to make it a more autonomous agency, which should enable it to access funds for fisheries research and management from donor agencies and from the private (fishing industry) and public sectors. The establishment of a Fisheries Commission, similar to the Guyana Forestry Commission or a Fisheries Institute, was suggested.

Fisheries fund

The Group suggested the establishment of a fisheries fund to support research and management of the fisheries resources. The Group felt that a 1% levy (or cess) on all fish exports should be levied and placed in this fund.

GENERAL AGREEMENTS

The main agreements reached on the management of the fisheries with the participation of the stakeholders, include:

- (i) Regarding shrimp fisheries it was agreed, based on the available scientific evidence, that fishing effort for penaeid shrimp and seabob must be limited at current levels. It was agreed that this fishery should be re-evaluated, in light of the shifts in effort from shrimp (*Penaeus spp.*) to seabob (*Xiphopenaeus kroyeri*).
- (ii) It was agreed that a cautious approach should be used in the development of the groundfish fisheries (including the snapper fishery) in order to avoid the decline that was being experienced in the shrimp fishery.
- (iii) The workshop recognised that regional co-operation for joint management of the shared stocks in Brazil-Guianas shelf was essential and that it should be pursued with the assistance of international and regional agencies such as FAO and CARICOM.
- (iv) It was emphasised that workshops of this nature (i.e. with strong participation of stakeholders) should take place regularly in order to promote co-management and auto-regulation of the artisanal fishery.
- (v) It was agreed that fishermen should meet, in a workshop environment, with fisheries managers and scientists to analyse and discuss issues pertaining to each of the major fisheries.
- (vi) There was agreement to update the current fisheries management and development plan for Guyana using the best available information.
- (vii) The participants acknowledged the need for and value of information in making management decisions and agreed to provide data to the Fisheries Department and to co-operate in data acquisition.
- (viii) The trawler operators/companies agreed to accommodate observers on board their vessels based on the plan for the implementation of an observer programme that should be developed jointly by the operators and the Fisheries Department.
- (ix) In acknowledging the presence of a senior observer from the Department of Fisheries of Suriname, the workshop suggested that Suriname should be invited to participate in meetings of this nature, when appropriate. Similarly, a senior observer from Guyana should attend meetings organised by the Fisheries Department of Suriname.

FOLLOW-UP

The workshop recommended that the Fisheries Department should take steps to follow up on the following issues which were identified for immediate action:

- (i) Prepare in co-operation with the Coast Guard of the Guyana Defence Force, a plan and a strategy for the monitoring, control and surveillance of the EEZ, which should include the participation of stakeholders, where appropriate.
- (ii) Conduct an analysis of the snapper fishery including a review of the current fishing agreement involving vessels chartered from Venezuela by local entrepreneurs.
- (iii) Discuss and review the new draft fisheries legislation and regulations with fishers and other stakeholders before it is enacted.
- (iv) Implement a public awareness and education programme for fishers on all aspects of fisheries, but starting with fisheries regulations governing management and conservation.
- (v) Prepare and implement the plan for the fisheries observer programme in collaboration with the trawler owners and operators.

List of Participants

NAME	AFFILIATION
Colin Austin	NEOCOL
Devo Badal	Betterhope
Gobin Basdeo	17 Better Squatting Area
Odeea Bevenuti	Warbuck Int. Seafoods
D. Bhola	Greater Georgetown Fishermen Co-operative
J. Burnett	Int. Fishing Investment
Thania Chin-a-Lin	Department of Fisheries (Suriname)
Patrick Daniels	Fishermen Co-operative
Joshua DaSilva	BEV Processors Inc.
Jai DeSouza Lall	18 Lusignan
Dhanraj	Rosignol Fishermen Co-operative
J. Flores	Coast Guard
Dexter Gordon	Ministry of Health
Claudine Hazel	Interest in fisheries
Roger Hinckson	Warbucks Int. Seafoods
Oudho Homenauth	NARI Director
Joylyn Jafarally	Hydromet. Division
George Jarvis	NEOCOL
Haniff Juman	Fishermen Co-operative
M. Khan	Greater Georgetown Fishermen Co-operative Society
M. Kishun	Annandale Sand Reef
C. Mohabir	Rosignol Fishermen Co-operative
M. Pashram	Georgetown Fishermen Co-operative
B. Persaud	Courbane Park
Anand Persaud Ramroop	Meadow Bank Fishermen Co-operative
P. Pooran	Fishermen Co-operative
Prensukh	Greater Georgetown Fishermen Co-operative
Maurice Rajkumar	Romar Company
Leslie Ramalo	Noble House Seafoods
Peter Ramesh	18 Lusignan
Harry Ramnarine	Rosignol Fishermen Co-operative
Edie Rodney	Member of Parliament
Vimla Roopchand	Environmental Protection Agency
Anand Singh	16 Ogle Airstrip Rd
Ramsarran Singh	Annandale Sand Reef
R. Singh	Courbane Park
Shivnarine	Greater Georgetown Fishermen Co-operative

DEPARTMENT OF FISHERIES

Ray Adams
Rawl Allen
Alika Austin
Jomo Glen
Michelle Baptiste
Rudolph Burnett
Roderick Daniels
Brian Dey
Tejnarine Geer

Brentnol Gibbs
Nandalall Gopaul
Angela Hackett
Anthony Kitt
Gangaden Khadoo
Dawn Mason
Vishnu Persaud
Winston Thom
Leslyn Walcott
Shawn Wiggins

CFRAMP

Terrence Phillips

RAU Leader – Shrimp & Groundfish, Trinidad & Tobago

FAO

Bissessar Chakalall

Regional Fisheries Officer, FAO Sub-Regional Office,
Barbados

Juan Carlos Seijo

FAO Consultant, Rector, Marista University of Merida,
Mexico

WORKSHOP PROGRAMME**Thursday 27th April**

9:00 - 9:40 Opening Ceremony

9:40 - 10:00 Coffee

10:00 - 11:30 Presentations
Chairperson: Mr. Mohammed Khan, Greater Georgetown Fishermen
Co-operative Society Ltd.

- A. Hackett Status of groundfish resources and implications for management.
- T. Phillips Status of shrimp resources and implications for management.
- J.C. Seijo Synthesis of the bio-economic assessments.

11:30 - 12:30 Discussion and questions

12:30 - 14:00 Lunch

14:00 - 15:00 Presentations
Chairperson: Mr. Maurice Rajkumar, Chairman, Trawlers Owners'
Association.

- L. Ramahlo and J. Da Silva The seabob and shrimp fisheries of Guyana -
Perspectives of the stakeholders.
- M. Khan The groundfish fisheries of Guyana - perspectives of the stakeholders.

15:00 - 16:00 Discussion

16:00 - 16:30 Presentation

- S. Wiggins Current management measures for shrimp and ground fish fisheries:
possible changes to management measures and their implications.

16:30- 17:00 Discussion

Friday 28th April

9:00 - 11:00 Group Work
Facilitator: Mr. Bisessar Chakalall, FAO Regional Fishery Officer

Suggested Topics

- Management measures for Shrimp Fishery (Industrial)
- Management measures for Groundfish Fishery (Artisanal)
- The Observer Programme
- By-Catch utilisation/reduction

(N.B. Topics for discussion will be selected at the end of Day 1)

11:00 - 12:30 Presentation of Working Group reports and discussion.

12:30 - 14:00 Discussions

14:00 – 15:45 Presentations

- S. Wiggins Areas for co-operation in research and management involving stakeholders' participation ()
- J. C. Seijo Regional approach/co-operation on research and management: benefits and costs ()
- B. Chakalall Role of FAO/WECAFC *Ad Hoc* Working Group on shrimp and groundfish fisheries of the Brazil-Guianas Shelf ()

15:45 - 16:00 Closing