



The Strategic Action Programme for the International Waters of the Pacific Small Island Developing States

**Quarterly Progress Report
Third Quarter 2002**

Oceanic Component

FORUM FISHERIES AGENCY

Activity 3.1

Long Term Fisheries Management Advice:

Major tasks undertaken by the Fisheries Management Adviser (FMA) included the following:

- i) Regional Level
 - Prepare brief for FFA Member States on data aspects of Scientific Coordinating group meeting
 - Participate in Prep Con Scientific Coordinating Group
 - Contribute to studies on provision of compliance services for the Commission
 - Provide advice to Solomon Islands on structure of criteria for tax exemptions for fisheries ventures
 - Prepare brief for FFA Member States for Prep Con3 on Commission Rules of Procedure and participation issues
- ii) National Level
 - Travel to Kiribati to participate in National Tuna Management Workshop
 - Undertake preparations for Kiribati Tuna Development and Management Plan
 - Make preliminary preparations for Marshall Islands tuna Plan
 - Prepare paper for Niue on strategy for implementation of the WCPF Convention
 - Travel to Niue to present strategy paper and participate in discussions on amendment of legal framework for fisheries
 - Provide review of draft Fisheries Management Act for Fiji
- iii) Programme Management
 - Participate in Multipartite review
 - Prepare draft Concept Paper for Phase II
 - Prepare redraft of IWP OFM Logframe and ProDoc sections
 - Provide advice on EU Project concept

Short Term Fisheries Management Advice



Fellowships were undertaken to:

- develop background material for a regional workshop in October 2002 to prepare FFA member countries for Working Group III on Monitoring, Control and Surveillance (MCS) at PrepCon.3 that would include further development of a draft MCS Scheme as a vehicle; and
- assess the cost of the FFA Secretariat supplying compliance services to the Western and Central Pacific Fisheries Commission, should the Commission request the Agency to supply such services.

Activity 3.3 International Meetings

Preparation was undertaken to ensure participation by Pacific Island country representatives in the Third Meeting of the Prep Con. The meeting will be held in Manila, Philippines in November 2002. IW/SAP funding will be used to support two participants from each FFA Island States at the Meeting.

Regional Workshops

No SAP funded activity in the reporting period

Activity 3.4 Fisheries management training

In-Country Fisheries Management Training

- National Tuna Fisheries Management Workshop held in Kiribati
- National Tuna Fisheries Management Workshop held in Niue
- Follow up workshop held on the implementation of the National Tuna Management Plan held in Fiji

Attachments

No activities funded this period.

Activity 3.6: Regional surveillance and enforcement

The long-term consultancy to assure the quality of the data in the databases operated by the FFA Secretariat moved into a consolidation phase where individual records of vessels in the database were assessed for completeness and accuracy.

SECRETARIAT FOR THE PACIFIC COMMUNITY

Activity 3.2 Fishery Monitoring Supervisor



The FMS returned from home leave in early July and subsequently attended the Fourth Central and Western Pacific Observer Coordinators Workshop in Honolulu, Hawaii from 15-17 July. The FMS presented the SPC report to the meeting. This was directly followed by attendance at the 15th Standing Committee on Tuna and Billfish (SCTB 15) also held in Hawaii on 22–27 July. The FMS played an active role at the meeting by presenting work to the Fishing Gear and Technology Working Group and also acting as the main rapporteur for that group.

On return from Hawaii, the 4th edition of the observer and port sampling newsletter “ForkLength” was written, edited, printed and distributed to the region, as well as being made available on the SPC website. The previously completed “Port Sampling Manual” was prepared for translation into French.

Port sampling data from the Marshall Islands was received at the end of July. The data covered the period from Feb-July 2002. There were 243 unique records received. Fortunately a remarkable improvement was noted in the Marshall Islands data with more than 90% of the data noted to be useable. This is a vast improvement to previously submitted data where the majority had been flagged as unacceptable. The improvement in this port sampling data is a direct result of the training provided by the FMS to the Marshall Islands during February 2002. The data will be subsequently checked for any falsified samples, although no problems in this area are expected.

In mid-September the FMS travelled to Pohnpei, FSM to undertake the task of verifying all observer data completed between 1998 and 2001. While in Pohnpei, 80 purse-seine observer trips and 77 longline observer trip reports were assessed. One of the main objectives of the exercise was to decide which of the observer trips on purse-seine vessels could be reliably used to calculate tuna species composition in landed catches. The review found that of the 80 trips completed since 1998, 51 could be confidently used in this type of analysis. This work continued into the 4th quarter. Sixty-three PNG observer trips were also prepared for data entry during the 3rd quarter. A comprehensive review of this data will take place in early 2003.

Activity 3.5 Stock Assessment Specialist

In July, the SAS attended SCTB 15 and made presentations to the Methods Working Group of that committee. The MWG established a work plan for the next year that will involve further development of the yellowfin tuna operational model and associated analyses using the MULTIFAN-CL (MFCL) estimation model.

Following SCTB 15, the activities conducted closely followed those proposed in the 2001-02 Work Plan submitted earlier. Further adjustments were made to the operational model to generate additional biological reference points based on Maximum Sustainable Yields (MSY). A Beverton-Holt type stock-recruit function was added to the model, and used to predict recruitment in all 5x5 regions based on the composition of the local population and oceanographic conditions in each region at given times. This changed the dynamics of the simulated population considerably,



so further model calibration was required to ensure that the predicted catch trends were still comparable to those observed historically in the WCPO. A yield analysis function was then added to predict future yields associated with given levels of fishing mortality, according to the procedure described in Hampton and Fournier (Mar. Freshwater Res., 2001, 52, 937-963.).

A new series of Monte Carlo simulations and tests are now being initiated, using the latest versions of the operational model and the MFCL software. These will focus on the effects of spatial stratification on the parameter estimates obtained with different assessment models (as requested by scientists attending the SCTB15 MWG), and on the reliability of the MSY-based reference points estimates obtained with MFCL when analysing SPC datasets of the yellowfin fishery in the WCPO.

Fisheries Research Scientist (Ecosystems)

The first meeting of the University of Hawaii Pelagic Fisheries Research Program project “Trophic structure and tuna movements in the pelagic ecosystem of the equatorial Pacific” was organized in Hawaii in July. The collaborators present (Valérie Allain – SPC, Nouméa, New Caledonia; Robert Olson - IATTC, La Jolla, USA; Felipe Galvan - CICIMAR, La Paz, Mexico; Brian Popp - University of Hawaii, Honolulu, Hawaii) discussed the implementation of the programme: sampling, analysis, database, staff, and administration. Preliminary isotope analysis and sampling preparation were scheduled for the end of the year to enable collection and analysis of samples as soon as the funding is available (expected to be early 2003).

Preliminary results of diet analysis of several species of the western Pacific warm pool ecosystem were presented during SCTB 15 in Honolulu.

Biological sampling: The FRS attended the fourth meeting of observer coordinators from the Pacific, also held in Honolulu in July. The sampling programme, protocol and equipment were presented and collaboration was requested to collect tissue samples in all the countries where national observer programmes now exist. Sampling kits were provided to FSM, Marshall Islands, PNG and Cook Islands. Kits should be sent later to Fiji and Solomon Islands.

During the 3rd quarter, stomach/muscle/liver samples were collected during two sampling trips on longline boats in New Caledonia and one sampling trip on a purse seine boat in FSM.

Two particulate organic matter (POM)/zooplankton sampling trips were organized on a trawler prospecting in the New Caledonian EEZ. It allowed the collection of 17 samples of POM and 56 samples of zooplankton using different mesh-size plankton nets. These samples will be isotopically analysed, and zooplankton samples will also be examined to determine species composition. Five plankton samples have been examined so far.



Two yellowfin tuna were collected during a sampling trip to obtain pieces of muscle from different parts of the fish to check the distribution of isotopes within a fish.

Biological analysis: The analysis of the stomach samples already collected continued during the third quarter. The stomachs of 404 fish of different species (yellowfin tuna, bigeye tuna, skipjack tuna, *Alepisaurus ferox*, dolphinfish, moonfish, wahoo, swordfish, billfish, sharks, blue shark) have been examined to date. 166 muscle and 73 liver samples were dehydrated and sent to the University of Hawaii for isotope analysis.

