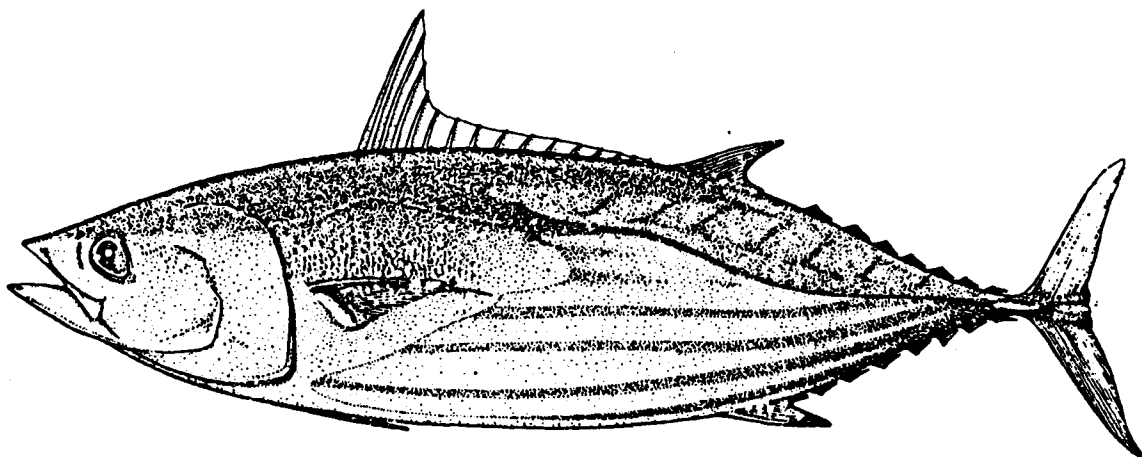


STANDING COMMITTEE ON TUNA AND BILLFISH

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WORKING PAPER 3

ACTIVITIES OF THE SPC FISHERIES STATISTICS PROJECT



Tuna and Billfish Assessment Programme
South Pacific Commission
Noumea, New Caledonia

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GOAL AND OBJECTIVES

The goal of the Fisheries Statistics Project (FSP) is to provide statistical services to national fisheries departments and to SPC fisheries programmes.

The objectives of the project are:

- (1) to maintain and report on the Regional Tuna Fisheries Database; and
- (2) assist with the collection and analysis of fisheries data at regional and national levels.

REGIONAL TUNA FISHERIES DATABASES

SPC/FFA REGIONAL TUNA FISHERIES DATABASE

Since its inception in 1981, the Tuna and Billfish Assessment Programme has maintained a database on industrial tuna fisheries in the region. The main sources of data have been daily catch and effort logsheets provided to SPC by member countries; the logsheets have been obtained either from distant-water fishing nations (DWFNs) under access agreements or from vessels of domestic fleets.

The database is used for research and monitoring purposes. The Tuna and Billfish Research Project uses the database to assess the state of exploitation of the stocks and to study interactions between the different fleets operating in the region. Monitoring of the fisheries is accomplished by the FSP through quarterly publication of statistics compiled from the database in the SPC Regional Tuna Bulletin.

In addition to research and monitoring conducted at SPC, the FSP also provides direct output through data summaries to the SPC member countries which provide the data. Reports summarizing the data are sent back to member countries on a quarterly basis. For several member countries, the processed data are returned on diskettes for incorporation into databases which are maintained on computers within each country.

Daily catch and effort data for tuna vessels fishing in the region have been received from Australia, the Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, the Marshall Islands, New Caledonia, New Zealand, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, the United States and Vanuatu.

Coverage by the Regional Tuna Fisheries Database has continued to improve. In 1989, coverage was extended to include the longline fleet in Australia, pole-and-line vessels in Kiribati, longliners in New Caledonia, the pole-and-line and purse seine fleets in Solomon Islands and the single pole-and-line vessel of Tuvalu. In 1990, data covering the pole-and-line and purse seine fleets of Australia were included in the database.

Coverage of American purse seiners increased considerably as of June 1988, when the multilateral fisheries treaty between the United States and certain Pacific Island nations went into effect. In addition, a large amount of historical data on Asian longliners operating in the southern portion of the region was received in 1989 from Australia, French Polynesia and New Caledonia. Daily catch and effort data for Korean and Taiwanese longliners based in Pago Pago, American Samoa, have been received from the United States covering fishing activities in 1987 and 1988.

STANDING COMMITTEE DATABASE

At the meeting of the Standing Committee on Tuna and Billfish held in Suva on 19-21 June 1989, the Committee considered the problem of inadequate statistical coverage of the fishing activities of distant-water fishing nations in the region, including Indonesia, Korea, Japan, Philippines, Taiwan and the USSR. The Standing Committee is an advisory sub-committee of the Regional Technical Meeting on Fisheries and is composed of most DWFNs which fish for tuna in the South Pacific, as well as SPC member countries. At the meeting there were representatives of Indonesia, Japan, Philippines and Taiwan, as well as several SPC member countries in attendance. It was concluded that

- (a) "SPC had succeeded in gathering most of the daily catch and effort logsheet data available through SPC member countries" for the SPC/FFA Regional Tuna Fisheries Database, but
- (b) "these data from local fleets, or collected under access agreements, still did not adequately cover the activities by DWFNs in the region".

The Standing Committee therefore discussed the establishment of a common database consisting of aggregated data provided by all fishing nations (including DWFNs), which would be separate from the data currently assembled by SPC in the SPC/FFA Regional Tuna Fisheries Database (which are contributed only by SPC/FFA member countries). The tuna fishing nations which have operated in the region include: Australia, Fiji, Indonesia, Japan, Kiribati, Korea, Mexico, New Caledonia, New Zealand, Philippines, Solomon Islands, Soviet Union, Taiwan, Tonga, Tuvalu, and the United States.

After much discussion, the following points represented the consensus:

- (a) "The establishment of a common database would be extremely useful and would solve current problems of inadequate coverage of the tuna fisheries in the region;
- (b) "Data should be provided at a level of aggregation consistent with levels of aggregation used by other tuna research organizations, i.e. by five-degree square and month for longliners and gillnetters and by one-degree square and month for other gear types;
- (c) "Data held in the common database should be made available to all countries that provide data to the common database, subject to the minimum level of aggregation (i.e., five-degree square and month for longliners and gillnetters and one-degree square and month for other gear types)".

The Standing Committee recommended that "SPC work towards the implementation of a common regional tuna database, holding data aggregated to an acceptable level, which would be available to all contributing partners via a defined distribution network." Representatives at the Twenty-First Regional Technical Meeting on Fisheries, held in Noumea on 7-11 August 1989, recognized that "the proposed common regional scientific tuna database will considerably improve scientific studies and assessments of regional tuna fisheries" and strongly recommended that it be implemented as soon as possible.

Requests for data for the Standing Committee Database were sent to all countries active in tuna fisheries in the region in March 1990. At present, data have been provided by Australia, Fiji, New Caledonia, Solomon Islands and Taiwan. Processing of data for the Standing Committee Database is currently underway.

SPAR DATABASE

At the Second South Pacific Albacore Research (SPAR) Workshop, held in Suva on 14-17 June 1989, the participants agreed to the offer made by SPC to act as a clearinghouse for the receipt and distribution of albacore data. Further, at the Second Consultation on Arrangements for South Pacific Albacore Fisheries Management, held on 2-7 June 1990 in Honiara, Solomon Islands, the meeting agreed that, as an interim arrangement prior to the establishment of the South Pacific Albacore Scientific Advisory Group, data will be provided to SPC by all fishing parties, and that SPC will compile all data and make it available for distribution.

Requests for data for the SPAR Database were sent to all countries concerned in October 1989. At present, catch and effort data have been provided by Australia, New Caledonia, Taiwan and the United States. Size frequency data have been provided by the United States. Processing of data for the SPAR Database is currently underway.

TRANSHIPMENT DATA

In 1988, the FSP began to compile statistics on tuna landings in the region. Data on transshipment have been received from French Polynesia, Guam, New Caledonia, the Northern Marianas and Palau, and data on landings at Levuka have been obtained from Fiji.

SPC REGIONAL TUNA BULLETIN

In August 1988, the Fisheries Statistics Project first prepared the *SPC Regional Tuna Bulletin*. The *Tuna Bulletin* has since been distributed on a quarterly basis to fisheries officers within the region and to research institutions and industry within the region and beyond. The *Tuna Bulletin* has been particularly well-received, in part because it represents the only authoritative source of information on the fishing activities of the industrial tuna fleets in the Central and Western Pacific, particularly since the cessation of publication of tuna fishery statistics by Japan in 1980.

Publication of recent editions of the *Tuna Bulletin* has been delayed due to an increase in the workload of the Commission's printery. In order to assure timely publication of the *Tuna Bulletin*, it is planned to have the printing transferred to a private company in Noumea. Funds

are currently being sought to finance the printing, which should cost roughly US\$ 10,000 annually.

NATIONAL FISHERY STATISTICS SYSTEMS

Several member countries have been assisted with the collection and analysis of local fisheries data. In February 1985, a data collection programme was implemented in Tuvalu to monitor subsistence and artisanal fisheries. In June 1986, SPC undertook a consultancy to review the fisheries statistics system in Tonga. In January 1987, a review of inshore fisheries data collection in Solomon Islands was conducted. In November 1987, the fisheries data collection programme in Palau was evaluated.

Commencing in 1988, tuna fishery databases have been developed and installed in the Federated States of Micronesia, Fiji, Guam, the Marshall Islands, Papua New Guinea and Solomon Islands. Each database has been customized to the needs of the individual country. Thus, in the Federated States of Micronesia and the Marshall Islands, the database systems enable monitoring of foreign fishing activities and licensing; in Guam, tuna transshipment by foreign vessels is monitored; in Fiji, foreign fishing activities, in addition to the local pole-and-line tuna and bait fisheries, are monitored; in Solomon Islands, foreign and domestic fisheries are monitored; while in Papua New Guinea, the database contains logsheets from foreign fishing vessels.

Database systems for local in-shore fisheries were developed for several countries at the SPC Fisheries Statistics Workshop held during February 1989 at the University of the South Pacific in Suva. Participants at the workshop included fisheries officers from Fiji, Papua New Guinea, Tonga, Tuvalu, Vanuatu and Western Samoa.

STATISTICAL SUPPORT FOR OTHER SPC FISHERIES PROJECTS

Statistical support is provided to other SPC fisheries projects, in particular the Tuna and Billfish Research Project, the Deep Sea Fisheries Development Project, the Inshore Fisheries Research Project and the Regional Fisheries Training Programme.

The research activities of the Tuna and Billfish Research Project are supported by the Regional Tuna Fisheries Database maintained by the FSP. In addition, databases for Solomon Islands length frequency data and US Multilateral Treaty port sampling and observer data have been developed, as well as for observer data from the South Pacific albacore fishery and port sampling data from transshipment by Japanese gillnet vessels in New Caledonia.

A database has also been developed for the tagging projects conducted by the Tuna and Billfish Research Project since 1989. The tagging database system allows tagging data to be entered on laptop computers onboard the tagging vessels; the tagging data can then be transferred to SPC headquarters on diskette.

In March 1989, the FSP implemented a database for detailed catch statistics collected during fishing trials in member countries by the Deep Seas Fisheries Development Project since 1981.

The database has been used by the Inshore Fisheries Research Project for analysis. In September 1989, a database system was developed for small-scale longline trials conducted by the Deep Seas Fisheries Development Project in Kiribati during 1989.

In 1988, a database covering the technical background of participants in regional fisheries training courses was developed for use by the Regional Fisheries Training Programme. The FSP has also assisted the Regional Fisheries Training Programme with organization of the SPC Fisheries Statistics Workshop held at the University of the South Pacific in February 1989 and shared in tutoring of the participants at the workshop.

ACTIVITIES OF THE FISHERIES STATISTICS PROJECT

COOK ISLANDS

- Ongoing provision of trip reports compiled from DWFN logsheets to the Ministry of Marine Resources.

FEDERATED STATES OF MICRONESIA

- Ongoing processing of logsheet data for DWFN vessels at SPC Headquarters and provision of data on diskette for incorporation into the Micronesian Maritime Authority database.
- Two visits in 1988, two visits in 1989, and one extended visit in 1990 to Pohnpei by FSP staff to provide programming support to Micronesian Maritime Authority for the MMA tuna fishery database.
- Attachment training of the MMA Statistician at SPC Headquarters for two weeks during October 1988.
- Design of data forms for FSM-OFCF Demersal Resource Assessment Project for Outer Banks of Truk and Yap, during attachment of the Fisheries Development Specialist of the Department of Resources and Development, August 1989.
- Recommendations for a microcomputer system for MMA, August, 1989.

FIJI

- Ongoing processing of logsheet data for local vessels at SPC Headquarters and provision of data on diskette for incorporation into the Fisheries Division database.
- Two visits in 1988 and one visit in 1989 by FSP staff to Suva to provide programming support for the Fisheries Division tuna fishery database.

- Installation of a baitfishing database system at the Fisheries Division during the SPC Fisheries Statistics Workshop, February 1989.

GUAM

- One visit in 1988, two visits in 1989, and one visit in 1990 by FSP staff to provide programming support for the tuna transshipment database at the Division of Economic Development and Planning of the Department of Commerce.
- Background support for a SPC-funded consultant studying tuna transshipment on Guam in May 1989.

KIRIBATI

- Ongoing provision of trip reports compiled from DWFN logsheets to the Fisheries Division of the Ministry of Natural Resource Development.

MARSHALL ISLANDS

- Ongoing processing of logsheet data for DWFN vessels at SPC Headquarters and provision of data on diskette for incorporation into the Marshall Islands Marine Resources Authority tuna fishery database.
- One visit in 1988, two visits in 1989, and one visit in 1990 to Majuro by FSP staff to provide programming support for the MIMRA tuna fishery database.

NEW CALEDONIA

- Daily catch and effort logbooks designed at SPC were provided to the Marine Marchande in May 1990, in order to collect data from Japanese pole-and-line vessels which began operating in the New Caledonia zone in early 1990.

NORTHERN MARIANA ISLANDS

- Design of a data collection form for monitoring of tuna transshipment on Tinian, for the Division of Fish and Wildlife, Saipan, August 1989.

PALAU

- Ongoing provision of trip reports compiled from logsheets for DWFN and chartered vessels to the Palau Maritime Authority.
- Evaluation of the fisheries data collection system in Palau in November 1988.

PAPUA NEW GUINEA

- Ongoing processing of logsheet data for DWFN vessels at SPC headquarters and provision of data on diskette for incorporation into the Department of Fisheries and Marine Resources tuna fishery database.
- Development of a DWFN logsheet database for the Department of Fisheries and Marine Resources in August 1988.
- One visit in December 1988 to Port Moresby by FSP staff to discuss further development of the Department of Fisheries and Marine Resources tuna fishery database.

PITCAIRN

- Analysis of 1989 longline catch data collected under an agreement with Japan for access to the Pitcairn Fisheries Zone, in correspondance with the Office of the Governor of Pitcairn, Henderson, Ducie and Oeno Islands in Auckland, September 1989.

SOLOMON ISLANDS

- Ongoing provision of trip reports compiled from DWFN logsheets to the Fisheries Division of the Ministry of Natural Resources.
- Evaluation of a proposed data collection system for subsistence and artisanal fisheries for the Fisheries Division in January 1986.
- Installation of an in-country daily catch and effort tuna database at the Fisheries Division, September 1989.
- Installation of a tag return database at the Fisheries Division for the Solomon Islands In-Country Tuna Tagging Project, September 1989.
- One visit in 1990 to Honiara by FSP staff to provide programming support for the Fisheries Division tuna fishery database.

TONGA

- Ongoing provision of trip reports compiled from logsheets for the Tongan longline vessel to the Fisheries Division of the Ministry of Agriculture, Fisheries and Forests.
- Review of artisanal fisheries data collection in June 1986.

- Assistance with development of a tuna fishery database system at the Fisheries Division during the SPC Fisheries Statistics Workshop, February 1989.

TUVALU

- Ongoing provision of trip reports compiled from DWFN logsheets to the Fisheries Division of the Ministry of Commerce and Natural Resources.
- Design of a data collection programme to monitor subsistence and artisanal fisheries in February 1985.
- Assistance with development of an in-shore fishery database system at the Fisheries Division during the SPC Fisheries Statistics Workshop, February 1989.

VANUATU

- Ongoing provision of trip reports compiled from DWFN logsheets to the Department of Fisheries.
- Assistance with development of a database system for the Village Fisheries Development Programme of the Department of Fisheries during the SPC Fisheries Statistics Workshop, February 1989.
- Assistance with attachment training of a Fisheries Officer with the Department of Fisheries at SPC Headquarters for three weeks during May 1989.