

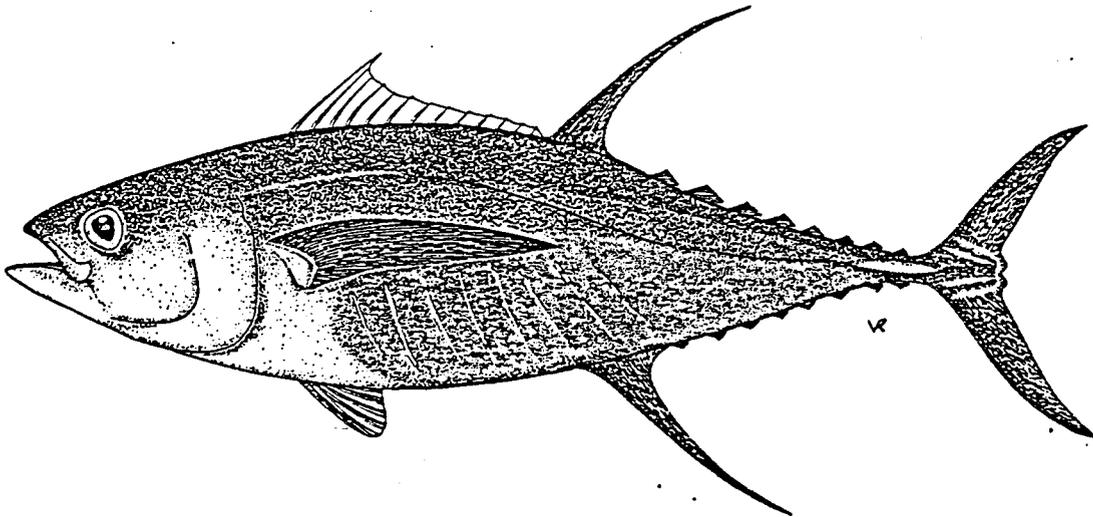
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## SIXTH STANDING COMMITTEE ON TUNA AND BILLFISH

16-18 June 1993  
Pohnpei, Federated States of Micronesia

WORKING PAPER 7

### A TBAP OPERATIONAL PLAN FOR 1994-98 AND THE STATUS OF THE SOUTH PACIFIC REGIONAL TUNA RESEARCH PROJECT



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

June 1993

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## 1. BACKGROUND

The South Pacific Commission's (SPC) Tuna and Billfish Assessment Programme (TBAP) was first implemented in October 1981 as the successor to the Skipjack Survey and Assessment Programme (SSAP). The TBAP had an initial mandate to run for three years, with a priority task of establishing a Regional Tuna Fisheries Database. As tuna catches, fishing fleet diversity and fleet size in the SPC area increased, the TBAP was required to undertake a more diverse range of research tasks, and the programme was extended firstly for two years and subsequently for a further five years. This second five-year period was completed on 30 September 1991.

SPC member countries, strongly supportive of the TBAP, expressed their desire for the programme to continue. As an initial step in this process, the 1990 Third Standing Committee on Tuna and Billfish (SCTB) recommended that "... a strategic plan for the next five-year period (1992-96) be prepared to guide the future direction of this programme, and proposed that the Standing Committee on Tuna and Billfish be authorized to develop a draft document for consideration at the 1991 Regional Technical Meeting on Fisheries ...". This recommendation was accepted by the 1990 Regional Technical Meeting on Fisheries (RTMF) and a draft strategic plan developed by a sub-committee comprising SPC Chief Fisheries Scientist Dr Antony D. Lewis, an EC-funded consultant Dr Timothy Adams, Mr Peter Sitan (FSM), Dr Talbot Murray (NZ) and Mr Andrew Wright (PNG).

SCTB4, in Port-Vila June 1991, was presented with this plan, much of which was concerned with proposed operational detail for the period 1992-96. The Plan outlined a series of objectives and strategies in four activity areas - Statistics and Monitoring, Biological Research, Stock Assessment and Modelling, and Reporting and Liaison, consistent with the overall Mission Statement. SCTB4, in the short time available, close to focus on clarification of mission statement, objectives and strategies, prepared by a drafting group.

This abbreviated Strategic Plan was then presented to RTMF 23 (1991), where it was adopted, and passed to 15th CRGA/31st Conference for approval. Following objections by one country, consideration of the Strategic Plan was deferred.

SCTB4, and in turn RTMF, recommended "that a detailed operational plan for 1992-1996 be developed by the TBAP and distributed in advance of the Fifth Standing Committee on Tuna and Billfish for evaluation by that meeting". With the Strategic Plan deferred by 31st Conference, this requirement was also deferred.

SCTB5 noted this, and the abbreviated Strategic Plan (attached as Annex I) was resubmitted to RTMF 24 (1992), readopted by that body, and resubmitted to 32nd Conference (Suva, October 1992) where it was approved.

## 2. THE SOUTH PACIFIC REGIONAL TUNA RESEARCH PROJECT (SPRTRP)

During 1990-91, concurrent with the development of the original draft Strategic Plan, a proposal for Lome IV funding, entitled the South Pacific Regional Tuna Research Project, was developed. This sought funds for a five-year Phase 2 tuna resource assessment, with increased involvement in port sampling, catch monitoring, scientific observer work, biological research and training.

Incorporating much of the activity proposed in the draft Strategic Plan, and costed at 5.5 M ECU over a five year period, this proposal was initially submitted for consideration to the Forum Secretariat in early 1991. The SPRTRP, in outline, had previously been strongly supported for Lome IV funding submission by RTMF 22 (1990) and 30th Conference (1990). Following lengthy delays, the proposal was approved as a high priority project with the Natural Resources Section of the Pacific Regional Indicative Programm by the ACP/EC Ministerial Meeting in June 1992.

Several adjustments were made to the SPRTRP, with the fifth (February 1992) version now under final consideration. With some linkage between the Lome III-funded RTTP, favourable review of that Project was required before the SPRTRP could be considered for financing (see WP6).

Following favourable review of the RTTP in March this year, a draft Financing Proposal under the 7th EDF has been prepared. In deference to EC preferences, the project has now been retitled the South Pacific Regional Tuna Resource Assessment and Monitoring Project (SPR TRAMP).

Uncertainties still however remain as to when funding will be in hand for this 5-year project which will incorporate crucial elements of any five-year operational plan. Under current SPC policy, no financial commitments can be incurred until funding is actually in hand. Given that this may not be the case with SPR TRAMP until early or even mid 1994, the five-year period to be covered by SPR TRAMP (and Lome Operational Plan) activity still remains unclear.

### **3. THE FIVE-YEAR TBAP OPERATIONAL PLAN**

Originally intended for the period 1992-1996 inclusive, the plan is now realistically likely to cover 1994-1998, with still no guarantee of funding for much of that work (SPR TRAMP and possibly parts of TBAP work, following unplanned funding cuts by one major donor this year).

As an interim measure until funding is assured, the following action is proposed.

- (i) consider the TBAP Work Plan for June 1993 - May 1994, as proposed in WP5. (this incorporates some elements of the SPR TRAMP)
- (ii) consider the operational aspects of the original draft Strategic Plan, and provide critical input to its further development into a formal Operational Plan. Activities within the Plan should be prioritized, in case full funding is not forthcoming for either TBAP or SPR TRAMP.

The Operational Plan template is provided as Annex II for the consideration of SCTB6.

## DRAFT STRATEGIC PLAN (as amended by SCTB 4)

### MISSION

To provide member countries with the scientific information and advice necessary to rationally manage fisheries exploiting the region's resources of tuna, billfish and related species.

### OBJECTIVES

The TBAP embraces all the principles of the South Pacific Commission. In promoting the rational exploitation of the tuna and billfish resources of the region, the TBAP will foster both regional and national capabilities to assess and manage those resources, maximise scientific cooperation for the benefit of all members, and maintain a commitment to high standards of fisheries science.

The TBAP objectives are:

- *To ensure that member countries receive the best available scientific advice.*
- *To provide member countries with accurate assessments of tuna and billfish stocks and the effects of fishing on the stocks.*
- *To provide member countries with timely reports from an accessible, high-quality service database encompassing the activity of all domestic and DWFN fleets in the region and adjacent areas.*
- *To enhance the national and regional awareness of fisheries issues through reporting research results and fisheries developments throughout the region.*
- *To maintain a commitment to developing national and regional capabilities in fisheries science.*

### STRATEGIES

To ensure that member countries receive the best available scientific advice, the TBAP will

- *Maintain and enhance capabilities to monitor fisheries exploiting tuna and billfish stocks in the region.*
- *Liaise with member nations to determine national requirements.*
- *Establish research and monitoring programmes which are well designed and peer reviewed.*
- *Communicate the results of research and review to member countries.*
- *Facilitate programme evaluation and review of research directions and progress.*

To provide member countries with accurate assessments of tuna and billfish stocks and the effects of fishing on the stocks, the TBAP will

- *Attract and retain highly motivated and well-trained fisheries scientists.*
- *Develop and apply fisheries assessment techniques appropriate to the region's stock assessment needs.*
- *Contribute to and collaborate in complementary stock assessment activities elsewhere.*
- *Conduct research to improve knowledge of the biology of the region's major tuna and billfish species in support of stock assessment.*

To provide member countries with timely reports from an accessible, high-quality fishery database encompassing the activity of all domestic and DWFN fleets in the region and adjacent areas, the TBAP will

- *Collaborate with member countries and other regional organisations to acquire comprehensive statistical data sets on fisheries exploiting the region's tuna and billfish stocks.*
- *Produce a range of fishery reports in support of national and regional requirements.*
- *Maintain and enhance in-country database capabilities for timely national fishery reports.*

To enhance the national and regional awareness of fisheries issues through reporting research results and fisheries developments throughout the region, the TBAP will

- *Produce briefings, newsletters, research reports and other publications on research findings and fishery developments.*
- *Organise meetings and workshops on key fisheries issues relevant to national and regional needs.*

To maintain a commitment to developing national and regional capabilities in fisheries science, the TBAP will

- *Assist in the development of national capabilities in the compilation of fishery statistics.*
- *Facilitate staff attachments in the TBAP and other appropriate training opportunities for Pacific Island nationals in TBAP research projects.*

## IMPLEMENTATION

These strategies will be implemented through activities in four programme areas

- *Statistics and monitoring*
- *Database maintenance, development and reporting.*

### *Biological research*

*Population biology of tunas and billfishes; age, growth, migration, stock structure.*

*Stock assessment and modelling*

*Data analysis and modelling of the status and impact of fishing on the major tuna stocks of the region.*

*Reporting and liaison*

*Interaction and reporting to member countries; promoting collaborative research towards TBAP objectives.*

Operational plans for 1992-1996 will be developed by TBAP and distributed in advance of the next SCTB for evaluation by that meeting.

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## 1. INTRODUCTION

In addition to ongoing TBAP activity as described in WP5, the following new or expanded activities are proposed, with ongoing TBAP activity identified where relevant.

### 1.1 Statistics and Monitoring

- <sub>2</sub>Establishment and operation of a scientific port sampling programme;
- <sub>1</sub>Establishment and operation of a scientific observer programme.

### Biological Research

- <sub>1</sub>Regular, but small-scale fieldwork sub-projects, including further tuna tagging<sup>1</sup> to elucidate localised stock assessment or interaction questions. Such sub-projects may be carried out in collaboration with other regional or national research programmes;
- <sub>1</sub>Establishment and operation of a laboratory facility for the processing of samples useful to research on age, growth and reproduction of tuna and billfish;
- <sub>1</sub>Establishment of facilities to enable postgraduate students to pursue research projects of relevance to the objectives of the TBAP.

### Assessment and Modelling

- <sub>3</sub>Continuing analysis of the results and information generated by the RTTP, with particular regard to stock assessment and interaction issues;
- <sub>2</sub>Development and application of stock assessment techniques based on size composition, catch/effort and supporting biological data.

### Reporting and Liaison

- <sub>3</sub>Support for the publication and presentation of project results, both to national and to regional administrations.

In addition, the SPR TRAMP would support the TBAP computer facility, which is central to much of the work of the project. This support would entail mainly the upgrading and maintenance of hardware and software resources, including the TBAP Regional Tuna Fisheries Database<sub>3</sub>.

*Note:* New activities for the TBAP are subscripted as <sub>1</sub>. Activities that are newly established as core activities following previous ad-hoc, or limited-term project support are subscripted as <sub>2</sub>. Established core activities that are in need of replacement, or additional funding support in order for the project to accomplish its aims within its timeframe are subscripted as <sub>3</sub>.

In terms of basic benchmarks, the specific aims of the SPR TRAMP can be summarised as follows:

- Reassessment, based on RTTP tagging and historical catch/effort data, of the preliminary stock

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<sup>1</sup> Small-scale compared with the regional scope and length of the current RTTP. Of short duration and confined to a limited area.

assessment for western Pacific skipjack tuna that was produced by the analysis of data resulting from the Skipjack Survey and Assessment Programme;

- Production of a comprehensive stock assessment for South Pacific albacore tuna;
- Production of a comprehensive stock assessment for western Pacific yellowfin tuna;
- Production of a comprehensive stock assessment for western Pacific bigeye tuna;
- Production of a comprehensive assessment of the interaction between skipjack/yellowfin purse-seine and yellowfin/bigeye longline fisheries;
- Production of a comprehensive assessment of the interaction between albacore surface and albacore longline fisheries;
- Estimation of the extent of the bycatch of other species resulting from the tuna fisheries, including billfish and marine mammals;
- Implementation of arrangements enabling comprehensive and timely monitoring of catch and effort by every vessel fishing for tuna in the SPC statistical area (this is unlikely to be completely achieved in the lifetime of the project, but the progressive improvement in coverage is easily quantified);
- Production of increasingly authoritative yearly status reports for each major tuna fishery of the region;
- Production, as requested, of authoritative status reports on the tuna and billfish fisheries and status of the tuna resource of Pacific ACP countries;

These "benchmarkable" objectives, which are achievable by the SPR TRAMP within the next 5 years, comprise most of the medium term outputs of the ongoing TBAP and inevitably build on other research already accomplished, or in progress. Given implementation, as planned, for other sub-projects and support it is likely that much more will be achieved, particularly in the "firming up" and finer detailing of assessments by the TBAP. However, if the objectives outlined above are achieved, then the SPR TRAMP will have achieved its goals.

In a heterogeneous and rapidly-changing fishery covering a substantial proportion of the Earth's surface, a 5-year project plan cannot take account of all future changes in fishing effort. The rapid increase in driftnetting and the influx of purse seiners forced out of the Eastern Pacific dolphin-associated tuna fishery provide examples of the sort of unforeseen changes that might occur in future to complicate the assessment work of the project.

However, one of the main aims of the project is to emplace mechanisms whereby future changes can be quantified, studied, and accounted for. The improvement of fleet and industry contacts, the formalisation of data-acquisition protocols with DWFNs, and the compilation of a comprehensive catch/effort dataset are all mechanisms that will enable the fisheries sectors of project beneficiaries to respond to future changes.

## **2. WORK PROGRAMME**

The work of the SPC's Tuna and Billfish Assessment Programme might be considered, over the past decade, to have formed a "Stage 1" regional tuna research effort: fundamentally an analytical function performed by a basic corps of specialists with *ad hoc* research projects to help cover large gaps in regional, and even global, knowledge of the parameters defining major fisheries.

This South Pacific Regional Tuna Resource Assessment and Monitoring Project will enable the TBAP to

expand into a "Stage 2" research organisation, which will encompass continuous scientific fisheries monitoring functions, establishing a comprehensive baseline of essential information as well as continuing to perform analytical functions and urgently-needed "tactical" research projects. This "Stage 2" may be seen as an intermediate step to defining an ultimate "Stage 3" organisation which will perform the full functions of a scientific secretariat in support of a regional tuna fisheries management regime.

## **2.1 Project Description**

The SPR TRAMP will initiate specific new activities within the Statistics and Monitoring Project of the TBAP, will enable the creation of a Biological Research Project, will enhance the analytical work of the Assessment and Modelling Project, will provide essential computer support to the TBAP over the five-year period and will provide support for the TBAP's Reporting and Liaison function.

### **2.1.1 Statistics and Monitoring Project**

The new activities planned under this project are scientific port sampling and observer components.

#### **2.1.1.1 Scientific Port Sampling Component**

A corps of dedicated Port Sampling Officers will be recruited under national terms of employment and based in-country (normally by attachment to the government fisheries administration in the country of deployment). These officers would be managed by a Port Sampling and Observer Manager, recruited by the project to coordinate all aspects of the port sampling and observer components.

Port Sampling Officers will be stationed at strategic transshipment and unloading points in the region, will be Pacific ACP nationals where possible, and will be responsible for documenting landings data, collecting logsheets (where authorised by member countries), checking for and collecting tags resulting from the SPC Regional Tuna Tagging Project and other experiments, collecting size-frequency and species composition samples and samples for biological analysis.

As with all TBAP activities, any raw data collected would be held by SPC in strict confidence, and used only for the purpose of scientific analysis. Copies of all data collected in individual countries would be made available to the Fisheries Departments of those countries.

While the first stage of the port sampling programme will be confined to regional ports, samplers may also be placed at major extra-regional landing points where western Pacific tuna are processed or transhipped.

The number of port samplers to be employed by the project will be approximately five, but the total number will be dependent on national pay-scales (normally less than regional rates). It is envisaged that office space would be provided by the government of the country where the officer is stationed<sup>2</sup> and, beyond some basic items of equipment, the major expense of the sub-project will be salary and travel costs.

#### **2.1.1.2 Scientific Observer Component**

The Forum Fisheries Agency maintains an observer programme on US purse seine vessels, using short-term placements of regional fisheries staff for the purpose of surveillance, compliance monitoring and biological sampling. The purpose of this component is to extend observer coverage to other fleets and gear types not monitored by the FFA programme and to enable more detailed biological data to be collected. Four full-time scientific observers will be recruited (from ACP states if possible) and trained for this purpose. It is stressed

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<sup>2</sup>This has already been agreed by at least one potential placement government.

that these observers would not carry out a surveillance or compliance monitoring function. The TBAP would, of course, maintain its involvement in the FFA observer programme through the training of observers and analysis of data.

The Scientific Observers would be based at SPC headquarters, under SPC conditions of employment, but would spend the majority of their time aboard selected fishing vessels. They would be under the general supervision of the Port Sampling and Observer Manager.

Expense will be incurred in staff costs (salary and seagoing allowance), travel to and from embarkation and disembarkation points, and some sampling equipment. Where fish are tagged, or samples taken, project funding would be available to compensate vessel owners for the loss of those fish.

Scientific Observers may also participate in research cruises (which would not cover more than 3 months of each year) where necessary.

### **2.1.2 Computer Support**

The Regional Tuna Fisheries Database held by the TBAP is one of the most fundamental activities of the programme, and will be the repository for all new information that results from the activities proposed under the SPR TRAMP. In addition, the database is used to process the large amounts of data currently being generated by the RTTP and fisheries catch and effort data received from a variety of sources. The database is currently implemented on a HP9000 series minicomputer, which will soon be the focal point of a computer network that also includes IBM-compatible and Macintosh microcomputers and a SUN spare-station. All analyses of data resulting from the SPR TRAMP will be undertaken on this computer system.

The further development and maintenance of the database and associated computer hardware is crucial to the success of this project, and the project will thus provide funding for TBAP computer support. This will provide for hardware and software maintenance for existing installations, operating consumables, and provision for the purchase of specific items of hardware and software needed by project staff.

### **2.1.3 Biological Research Project**

The new Biological Research Project will undertake most of the field-based and laboratory-based research of the TBAP. The project will be supervised by a Senior Fisheries Scientist to be recruited from TBAP core funds. All other staff will be recruited from SPR TRAMP funds. It is intended that all of the activities of this project be funded through the SPR TRAMP. The project will consist of three components: a field component, a laboratory component and a training component.

#### **2.1.3.1 Field Component**

The objective of the Field Component is to undertake field experiments to investigate specific stock assessment and tuna fishery interaction problems. It is likely that such experiments, in contrast to the RTTP, would concentrate on small-scale problems of national interest. Studies would be designed by senior TBAP staff in close consultation and collaboration with national counterparts.

The Field Component would be manned by two senior biologists, recruited by the SPR TRAMP, who would jointly supervise field experiments, assist in the design and planning of experiments and undertake detailed analyses of the data in collaboration with other TBAP staff. They will be assisted in the field by two biological technicians, and at headquarters by a research officer (data), who will be recruited from EC/APC countries if possible.

It is planned that actual field work would commence in year 3 of the project, continuing for years 4 and 5.

Therefore the biological technicians would not be recruited until year 3. Similarly, operational funding for the field component is only requested for years 3, 4 and 5. In years 1 and 2, the Biological Research Project would concentrate on working up the massive amount of biological data collected by the RTTP, defining specific problems to be investigated during years 3-5 (including extensive consultation with national Fisheries Departments) and preliminary planning of the work to be undertaken.

It is anticipated that the major research technique to be used would be tagging; however other research techniques might also be used as the problem and situation warrants. Tagging would be carried out from commercial vessels, paying for the fish tagged and released. Alternatively, charters of commercial ACP/EC vessels or appropriate national ACP/EC government research vessels might be undertaken. The exact methodology to be used will depend on the circumstances of the project and vessel availability -- factors which cannot realistically be predicted.

#### **2.1.3.2 Laboratory Component**

The project will support the construction, equipping and operation of a basic laboratory facility for the analysis of biological sampling resulting from the observer and port-sampling components of the Statistics and Monitoring Project, the Biological Research Project and, in the first instance, the RTTP. This work could encompass ageing of otoliths or other hard parts, stomach contents analysis, histological preparation and analysis of reproductive material and perhaps genetic methods of population differentiation. The equipment needed for such work is, by and large, not sophisticated.

Until laboratory construction is completed, any essential analyses would be contracted to outside research agencies. Some contracting of the more complex laboratory work may still be necessary from time to time after completion of the facility.

#### **2.1.3.3 Training Component**

Numerous short-term training opportunities in a variety of fisheries-related areas are regularly available to Pacific Islanders. In the areas of fisheries biology and assessment, it is not clear that such short-term training has been particularly effective. With the expansion and re-structuring of the TBAP that the SPR TRAMP will facilitate, advantage should be taken of the TBAP facilities and expertise to offer longer-term training opportunities to ACP Pacific Islanders.

It is proposed that funding be made available through the SPR TRAMP to support longer-term (up to two years) attachments of ACP nationals undertaking a postgraduate degree in fisheries assessment or biology. Such students would be affiliated with a recognised university and obtain the agreement of the university to undertake all or part of the research component of their degree while based at the TBAP. The intention is that such students would undertake field, laboratory or computer-based work for their degree, drawing on TBAP facilities and expertise for support. Ideally, such work would be of relevance to tuna fisheries problems in the student's own country. With the agreement of the university concerned, a suitably qualified TBAP staff member would be appointed as the student's co-supervisor. While placed within the Biological Research Component, attached students would have access to the full range of TBAP facilities and expertise.

It is proposed that at least two such postgraduate studentships be offered during the course of the SPR TRAMP, one in years 2 and 3 and one in years 4 and 5. As the exact period of attachment will depend on each individual student's degree programme, a third studentship might be available in years 4 or 5.

#### **2.1.4 Assessment and Modelling Project**

The objective of the Assessment and Modelling Project is to develop and apply tuna population dynamics models for the analysis of stock condition and fisheries interaction in support of national and regional fisheries management initiatives.

This project will be funded largely from TBAP core sources; however funding is sought through the SPR TRAMP for short-term contracts that will be necessary from time to time to undertake detailed and specialised analyses of SPR TRAMP data. This facility will enhance the capability of the TBAP to fully address important research questions that arise during the course of the project and assist in the timely dissemination of results.

### 2.1.5 Reporting and Liaison

Administrative support is required for communication and publication costs associated with the project. These costs will be charged to the project in line with standard SPC practice.

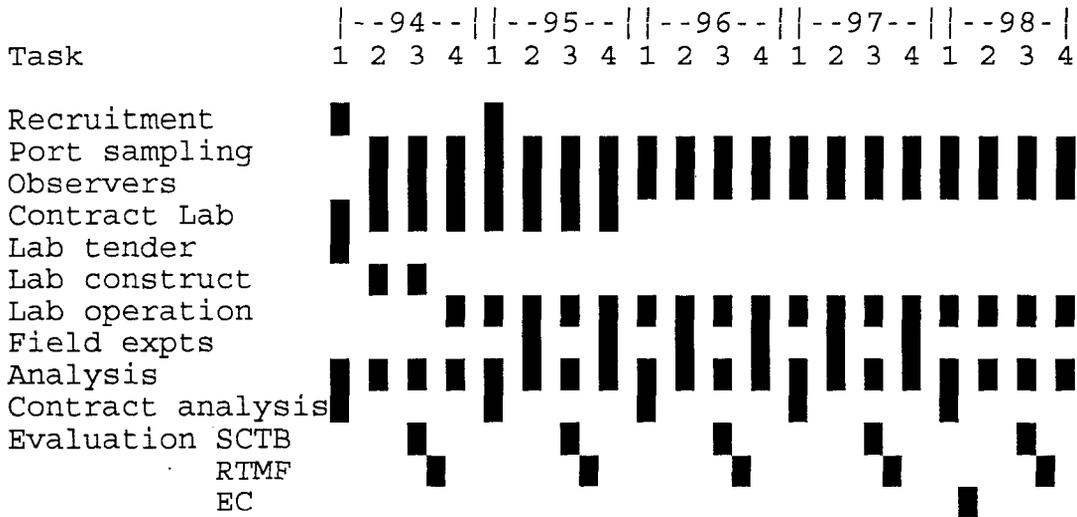
## 2.2 Personnel

The SPR TRAMP will require the following staff:

- *Port Sampling and Observer Manager* (SPC P2 level)  
Responsible for organising and supervising work and placement of observers and port samplers, and for ensuring that the highest quality of data possible results from these components. The position would entail considerable travel within the region and continuous contact with both national administrations, DWFN fleets and component staff members.
- *Scientific Observers* (SPC P5 level) 4 positions  
Responsible for biological sampling of catches on board commercial tuna fishing vessels operating in the western Pacific. Also assisting, where necessary, with the on-board implementation of the short-term tagging or other experiments under the Biological Research Project. These observers are likely to spend at least 75% of their time at sea.
- *Scientific Port Samplers* (Local conditions) 5 or more positions  
Resident at key unloading or transshipment points in the region or, if necessary, beyond, and responsible for documenting landings data, collecting logsheets (where authorised by member countries), checking for and collecting tags resulting from the RTTP and other experiments, collecting size-frequency and species composition samples and samples for biological analysis. Such staff might be nationals employed on a contract basis, or attached to national fisheries administrations.
- *Senior Fisheries Scientist* (Biological Research) (SPC P2 level) 2 positions  
(Duties to be shared according to interests and expertise)  
Responsible for the direction of the laboratory facility and coordinating contract work to other laboratories. Together with other senior TBAP staff, responsible for the planning and implementation of field experiments, the analysis of results from those experiments and of biological data collected by the RTTP and by the port sampling and observer components of the Statistics and Monitoring Project.
- *Biological Technicians* (Field) (SPC P5 level) 2 positions  
Undertake, under direction, technical work associated with tagging, biological sampling and other field-based activities of the project. It is expected that up to 50% of time would be spent at sea, and the remainder spent in assisting with the processing and analysis of data and samples collected.
- *Research Officer* (Data) (SPC P4 level)  
This position is equivalent to the existing Research Officer position in the RTTP, and the duties would similarly involve processing of biological and tagging data and developing and implementing procedures to maintain the highest standards of data quality control.

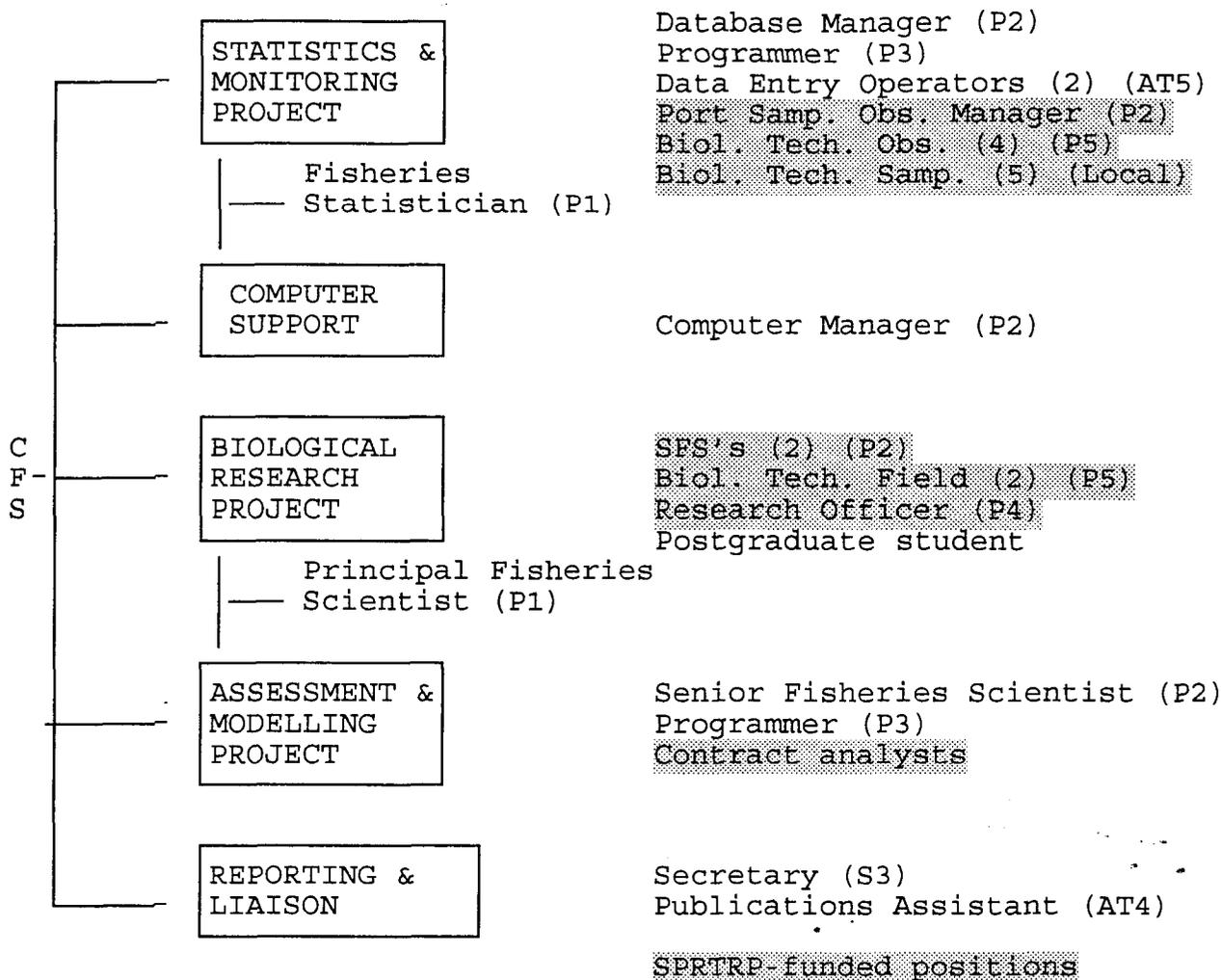
### 2.3 Implementation Schedule

The target startup date for the project is 1 January 1994, thus dovetailing with the RTTP, which is scheduled for completion on 31 December 1995. This timing will maintain the research impetus developed by the RTTP and allow specific research to be continued or initiated at a time when the tuna fisheries of the western Pacific are still developing rapidly. The implementation schedule for the specific project components is:



### 2.4 Organisation and Management

This project will be an integral part of the work of the TBAP, which is administered under the Fisheries Programmes of the South Pacific Commission. The SPC Secretary-General and Director of Programmes supervise 6 major regional development programmes in addition to support and administrative services. Under the Fisheries Programmes, the Fisheries Coordinator supervises both the Coastal Fisheries Programme and the TBAP. The TBAP is directed by the Chief Fisheries Scientist and has a proposed structure as follows:



## 2.5 Operation and Maintenance

The South Pacific Commission provides a full range of administrative services to its programmes. These services include utilities, building maintenance, communications, staffing and accounting functions. Project auditing would be through the normal SPC system, possibly with the assistance of a recently approved EC financial coordinator based at SPC, accountable to the South Pacific Conference of members as well as EC. The TBAP is also likely to be the subject of at least one comprehensive, member-funded, programme review within the life-cycle of this project.

Linkages between the TBAP and relevant external authorities are already good, and little problem is envisaged in the implementation of the Port Sampling Component through in-country project staff placements, building on the experience gained during the RTP.

This project will institute and test certain new functions for the TBAP, which will remain as part of the core programme for the foreseeable future. Any equipment purchased by the project will thus be fully utilised beyond the end of the project. Conversely, it is expected that "core" funding will be found to take over the maintenance of these functions after the project finishes, possibly through the provision of services to a regional tuna management regime. The establishment of the TBAP's role in any regime may, however, require additional external funding.

To some extent, research programmes of this nature can never become strictly self-supporting unless there is a definite short-term monetary value attached to the results of research, and unless those results are

reported only to the agency which commissioned and paid for them. Such a limited approach would not be in the interests of the long-term sustainability of the resource through international collaboration and certainly discriminate against the limited capabilities of ACP countries. In the strictest sense, the work of the TBAP throughout its entire history has been supported entirely by non-ACP countries (apart from a percentage of the SPC administration services provided in kind), and this situation is likely to continue.

All agencies which contribute to the funding of the TBAP have a legitimate interest in the fishery, either as (actual or potential) fishing nations or as resource custodians and, in this broader sense, the TBAP is already self-supporting. However, the sense of "self-support" would become stronger if certain activities were funded by membership payments under a management regime. The activities most likely to be supported by such arrangements are precisely the direct fisheries scientific monitoring functions that are initiated by this project.