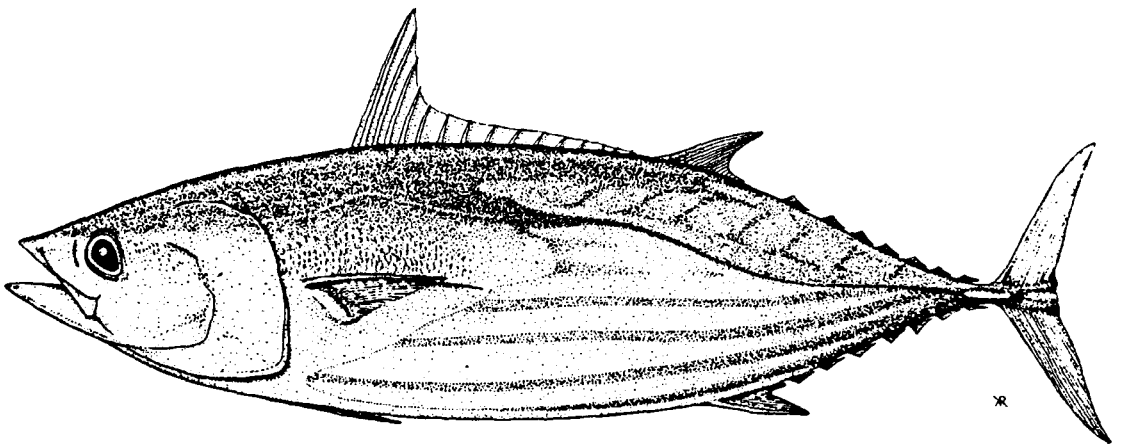
REPORT OF THE EIGHTH MEETING OF

THE STANDING COMMITTEE ON TUNA AND BILLFISH

Noumea, New Caledonia
16-18 August 1995



Oceanic Fisheries Programme
South Pacific Commission
Noumea, New Caledonia

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II. SUMMARY OF DISCUSSIONS

1. PRELIMINARIES

1.1 Opening Address

1. Dr Tony Lewis, Oceanic Fisheries Coordinator of the South Pacific Commission (SPC) Oceanic Fisheries Programme (OFP) introduced Ati George Sokomanu, Secretary General of the South Pacific Commission, who welcomed the participants to Noumea. Mr Sokomanu's opening address stressed the importance of the meeting in bringing together the coastal states and fishing nations to consider regional resource issues.

1.2 Appointment of Chairman and Rapporteurs

2. Mr Colin Brown was appointed chairman. Apologies were tendered for the representatives from the Federated States of Micronesia (FSM) and Papua New Guinea (PNG).

3. Mr David Burgess was appointed chief rapporteur. The rapporteurs for each agenda item were appointed as follows:

Agenda Item 1	Mr David Burgess
Agenda Item 2.1	Mr Peter Ward
Agenda Item 2.2	Mr David Itano
Agenda Item 2.3	Dr Robert Campbell
Agenda Item 2.4	Dr Gary Sakagawa
Agenda Item 3.1	Mr Ward
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Agenda Item 3.3	Dr Pierre Kleiber
Agenda Item 3.4	Mr Sylvester Diake
Agenda Item 4	Mr Itano
Agenda Item 5	Dr John Sibert
Agenda Item 6	Mr Tony Kingston
Agenda Item 7	Dr Kleiber
Agenda Item 8	Mr Peter Sharples

1.3 Meeting Procedures

4. Two Recommendations and four Action Items were developed at the seventh meeting of the Standing Committee on Tuna and Billfish (SCTB7). Each Recommendation and Action Item was considered under the relevant agenda items, as indicated, and a summary of the SCTB7 Recommendations and Action Items, and the actions taken, are given in Section III.

5. There was a suggestion for two agenda items to be added to Agenda Item 6, *Regional/International Developments Impacting the OFP*. Dr Sakagawa proposed adding item 6.4, *Interim Scientific Committee on North Pacific Tuna and Tuna-Like Species*. Mr Katsuyama proposed adding item 6.5, *Alternative Methods for Data Collection and Dissemination*.

1.4 Adoption of the Report of the Seventh Standing Committee on Tuna and Billfish (Koror, Palau, 5-8 August 1994).

6. The meeting formally adopted the report of the Seventh Standing Committee on Tuna and Billfish (Koror, Palau, 5-6 August 1994), Working Paper 1, without amendment.

2. OVERVIEW OF WESTERN PACIFIC TUNA FISHERIES

2.1 National fishery reports

7. Dr. Lewis introduced this agenda item by providing a brief overview of developments in tuna fisheries in the SPC region during 1994, referring to Working Paper 2, *Tuna catch statistics for the SPC statistical area, including preliminary estimates for 1994.*

8. During 1994, the total catch in the SPC statistical area and the waters of eastern Indonesian and the Philippines was approximately 1.30 million t, which represents an increase of 6.5 per cent from the 1993 catch of 1.22 million t. The estimated catch in the SPC area alone was 990,000 t, an increase of 6 per cent on 1993, but well down on the 1991 and 1992 catches.

9. Eighty per cent of the total catch in the SPC area was made by the purse seine fleets of primarily, Republic of Korea, Republic of China, Japan and the USA, with all but the later having increased catches relative to 1993. Purse seine catches increased by 45,000 t overall. 1994 was another *El Nino* influenced year, reflected in the more easterly distribution of effort by some fleets.

10. Longline catches also increased (14,400 t), mainly through increased activity of sashimi vessels operating out of various ports in the region. Most of the by-catch was also being landed in some ports. The pole-and-line catch was slightly above that of 1993, but the distant-water component of this fishery continues its long term decline.

11. Skipjack constituted 66 per cent of the total catch (90 per cent by purse seine), with yellowfin 22.5 per cent (80 per cent by purse seine), bigeye 5 per cent (longline catches only), and albacore 3.4 per cent (33,800 t, all by longline). Only the yellowfin catch was down on 1993 figures, by 42,000 t.

12. National tuna fishery reports were then presented. Summaries of these follow in alphabetical order.

2.1.1 Australia

13. Mr Ward presented the report on Australian tuna fisheries. Catches of tropical tuna and billfish in the north-eastern Australian fishing zone are small compared with those in the wider western Pacific. The appearance of most tuna and billfish species off Australia's east coast varies seasonally and from year-to-year. Annual catches of tuna and billfish in the north-eastern Australian fishing zone range between 3,000 and 11,000 t, averaging about 7,500 t a year. Despite the progressive introduction of restrictions, distant-water Japanese longliners fishing under bilateral access agreements with Australia continue to account for most of the catch. For example, they reported almost 70 per cent of the total yellowfin catch of 2,900 t in 1994. Most of

the remainder is taken by Australians using longline in coastal waters. Their 1994 catch was double the annual catches over the past five years, mainly as a result of increased activities in the Coral Sea off North Queensland. Joint-venture and chartered longliners reported only 60 t of yellowfin in 1994. Recreational anglers also take small catches of yellowfin. Recreational angling accounts for a far greater proportion of the marlins—about 50 per cent of the total black marlin catch, for example. Tuna and billfish are taken by a variety of other methods, such as pole-and-line, purse seine and trolling. Pole-and-line and purse seine are used to take skipjack tuna off southern New South Wales. The annual skipjack catch reached 6,000 t in the early 1990s then fell to below 1,500 t a year.

14. The discussion highlighted the large decline in purse seine catches in Australia during from 1992 to 1994. The decline probably reflected the marginal economic viability of these operations overlaid on the high inter-annual variability in skipjack availability. While there was no information currently available, changes in fleet structure might also be implicated because of the wide range of vessel sizes, 80-450 gross registered tonnes (GRT) operating in the fishery.

15. The SCTB also discussed the recommendation by the East Coast Tuna Management Advisory Committee (ECTUNAMAC) to ban the retention of billfishes (except broadbill swordfish) in the Australian fishing zone. This arose mainly as a result of concern by recreational anglers over the condition of the black marlin and blue marlin resources. Striped marlin were included in the ban because of problems in distinguishing large striped marlin from blue marlin. The concern amongst recreational anglers was mainly driven by a poor black marlin season in 1993. Preliminary analyses of longline catch and effort data suggested that the poor recreational season may have been influenced by environmental factors and that longline catch rates of black marlin had remained relatively constant since 1975. The SCTB also discussed the value of logbook data to stock assessment in fisheries like this, where the release of marlin was promoted and agreements were in place for commercial fishermen to release billfish. The discussion highlighted the importance of observer programmes in such situations.

16. No estimates for troll catch were given because of the opportunistic nature of most of the trolling and uncertainties over logbook coverage and data quality. Nevertheless, Mr Ward agreed to provide the OFP with estimates of the Australian troll catch of tuna and billfish.

2.1.2 Cook Islands

17. Mr Brown presented the report on tuna fisheries in the Cook Islands. Cook Islands is currently encouraging the development of a locally based longline tuna fishing industry based on the fresh fish sashimi market. At present two 180 tonne vessels are operating out of Rarotonga. It is anticipated that in the short term, three more vessels will be licensed to operate.

18. Two fish packhouses have also been established, which pack and airfreight sashimi quality tuna and other fresh fish to markets in the United States, New Zealand and Japan. Fish is also sold on the local market. In the past, the Cook Islands has licensed both Taiwanese and Korean longliners, but in 1992 the Korean fleet did not seek to renew licences, and in 1995 the Cook Islands Government decided that it would only license Taiwan longliners as part of a regional fishing access arrangement. Negotiations with Taiwan on the regional arrangement are continuing.

19. Since fishing operations began in June 1994, approximately 168 t of fish has been exported to New Zealand, Japan and the United States or sold on the local market. Approximately 21 per cent of the catch (35 t) was albacore, bigeye accounted for 10 per cent (17 t), yellowfin was 14.5 per cent (24 t), skipjack 1 per cent (1.8 t), marlin 20 per cent (34 t) and swordfish 19 per cent (32 t). The SCTB noted that 50 t of skipjack were taken in the northern Cook Islands during 1993 by US purse seiners.

2.1.3 Federated States of Micronesia

20. The following report on tuna fisheries in the Federated States of Micronesia was prepared by the OFP, based on a background paper provided by the Micronesian Maritime Authority (MMA). The total catch taken in FSM waters by foreign and domestic vessels during 1994 amounted to 117,070 t. The majority of the catch, 84 per cent, was taken by purse seiners, which harvested 97,902 t. Longline vessels accounted for 14,570 t and pole-and-line vessels caught 4,598 t. The 1994 catch represented a 32 per cent decrease from the 1993 total. This drop was mostly caused by a sharp reduction in purse-seine catch, from 149,981 t in 1993 to 97,902 t in 1994. This drop goes against a trend of steadily increasing catches over the last five years.

21. Japanese purse seiners accounted for most of the 1994 catch, taking 50,364 t. The composition of the various longline fleets fishing for the Japanese sashimi export market has changed dramatically since 1992, when Taiwanese and mainland Chinese vessels began using FSM ports as transhipment bases. The catch by Japanese longline vessels has fallen to 4,942 t for 1994 (half the 1993 total), while catches by Chinese longline vessels have risen to 6,534 t for 1994 (almost double the 1993 total). Catches by Taiwanese longline vessels dropped slightly to 2,960 t. The pole-and-line catch of 4,598 t for 1994 was a 30 per cent decrease on the 1993 total. The main reason for the declining trend in catch has been a reduction in the size of the Japanese pole-and-line fleet and the corresponding decrease in fishing effort.

22. The MMA Fisheries Observer Programme conducted 58 observer trips (29 purse seine; 27 longline; 1 pole-and-line and 1 research cruise) on foreign and domestic vessels fishing in and around the FSM EEZ during 1994. The MMA observer programme has recently benefited by the implementation of an observer database system (with the assistance of the OFP) to process the various data collected and produce timely reports on such important topics as by-catch and discards. MMA have also been involved in providing observers for the US Multilateral Treaty Observer Programme, and in arranging for the placement of three FSM National Fisheries Corporation fishermen on-board Taiwanese longline vessels as MMA observers, in order to gain valuable experience which can then be applied to the domestic fleet.

23. The MMA Port Sampling Programme continued to collect size and species composition data from purse-seine and longline vessels unloading in Chuuk, Kosrae, Pohnpei and Yap during 1994. Chuuk remains the busiest transshipment port in FSM, with over 400 purse-seine transshipments undertaken during 1994.

2.1.4 Fiji

24. Mr Subodh Sharma presented the report on Fijian tuna fisheries. The Fijian pole-and-line fishery commenced in 1976. Vessel numbers have fluctuated widely, ranging up to 14 vessels in 1982. Ten vessels operated in 1994, catching almost 3,500 t of skipjack and yellowfin tuna. This

was consistent with catches in recent years, but down from the peak catches of 1982 (5,828 t) and 1989 (5,883 t). The locally-based longline fishery has continued to expand, showing good prospects for further development. The fishery's total catch of commercial species was almost 2,500 t in 1994. This consisted of bigeye (10 per cent), yellowfin (26 per cent), albacore (35 per cent), and other export species, such as billfish, wahoo, opah and mahi mahi.

25. The locally-based tuna longline fishery commenced in 1986, and by 1994, 37 longliners were active. This included nine US-flagged longliners from the Hawaiian swordfish fishery. Under contract to the Pacific Fishing Company (PAFCO) cannery, distant-water Taiwanese and Korean longliners fished in Fiji's Exclusive Economic Zone (EEZ) and other waters. In 1994 they landed over 3,500 t of tuna and other species at the cannery. Under the US Multilateral Treaty, US purse seiners caught 8,000 t of skipjack and yellowfin in the far north of Fiji's EEZ in 1994. This greatly exceeded previous catches, which had been below 100 t in most years. The OFP recently presented Fiji with a National (Tuna) Fisheries Assessment, which had greatly helped Fiji in consolidating management arrangements for the pole-and-line and longline fisheries. The OFP has also provided technical advice on fleet structure and catch levels that was used in developing licensing arrangements for the locally-based longline fishery.

26. The SCTB noted that five of the nine US-flagged longliners returned to Hawaii in 1994. The recently introduced incentive-based licensing system provides for varying degrees of access under three categories reflecting the degree of Fijian involvement in the operation.

27. The landing and marketing of longline bycatch in Fiji is noteworthy because it may be a precursor of a regional trend. About 30 per cent of longline exports are by-catch species, including mahi mahi, wahoo and opah. The species composition of longline by-catch exports is available for 1994, but not for previous years.

2.1.5 French Polynesia

28. The report on tuna fisheries in French Polynesia was presented by Mr Arsène Stein. The 1994 catch of tuna and billfish in French Polynesia amounted to 3,532 t. The tuna component of this total accounted for 2903 t, with skipjack being the biggest contributor. The surface fisheries, namely trolling and pole-and-line, accounted for 370 t and 1,018 t of the 1994 total respectively. These two fisheries caught mostly skipjack and juvenile yellowfin. Vertical longlining accounted for 139 t of the 1994 catch, taking mostly albacore and large yellowfin.

29. The fastest growing fishery at the moment is the sashimi longline fishery, which has increased from two vessels in 1990 to 66 vessels in 1994, catching 2,005 t. Production increased 30 per cent from 1993; however, catch rates dropped from 47 kg per 100 hooks in 1993 to 43.5 in 1994. Albacore is the predominant species caught, accounting for more than two-thirds of the tuna catch. In 1995 the number of longliners seems to have stabilised and the prospects are for an annual catch of 4,000 to 5,000 t. Most, approximately 80 per cent, of the longliners are based in Papeete. Catch rates there had declined steadily since 1992, and five longliners had recently relocated further north, in the Marquesas Islands, where catch rates were better.

30. Almost all of the tuna and billfish landings (95 per cent) are consumed by the local market. The SCTB noted that this was in sharp contrast to other longline fisheries of the region, where the bulk was exported to sashimi markets in Japan, Hawaii and the US west coast. Of the small

proportion of the catch exported from French Polynesia, about 75 per cent went to Europe. The sashimi export market in French Polynesia is presently encountering supply problems related to both quantity and quality because the proportion of bigeye tuna weighing over 30 kg and with a high fat content remain low.

31. The Territory of French Polynesia is committed to developing the fishery sector, and especially the longline fleet, by means of direct or indirect support in terms of both funding and capital investment in facilities.

2.1.6 Indonesia

32. Dr Nurzali Naamin presented the report on Indonesian tuna fisheries. Skipjack are the principal tuna species caught in the Pacific Ocean waters of Indonesian, accounting for 80-90 per cent of total tuna landings and for 85-95 per cent of the pole-and-line landings. Skipjack landings skipjack increased from 77,346 t in 1993 to 81,219 t in 1994. Yellowfin is the next most important species; it comprises 50-95 per cent of the longline, 5-15 per cent of the pole-and-line and 25-75 per cent of the purse-seine catch. The 1994 yellowfin landings were estimated to be 5,830 t by the pole-and-line fleet, 4,600 t by the longline fleet and 4,900 by the purse seine fleet. The number of pole-and-line vessels in eastern Indonesia was fairly constant at 820 vessels in 1994. The number of longliners decreased slightly, from 309 in 1993 to 293 in 1994. Tuna landings by artisanal fishermen using handline rose from about 5,000 t in 1993 to about 6,000 t in 1994. Artisanal fishermen also catch tunas with a variety of other 'unclassified' gears, such as gillnet, Danish seine and troll. The unclassified catch decreased from about 38,608 t in 1993 to 37,650 t in 1994.

33. Three Indonesian purse seiners based in Biak had ceased fishing in 1992 when their company encountered financial problems. The operations recommenced in 1993.

2.1.7 Japan

34. Mr Naozumi Miyabe presented the report on Japanese tuna fisheries. The Japanese tuna fisheries in the western Pacific Ocean are composed of three major fisheries: longline, pole-and-line and purse seine. Bigeye and yellowfin tuna are the primary target species of longliners, and skipjack is the dominant species for pole-and-line (more than 90 per cent) and purse seine (about 70 per cent of landings). The number of licensed tuna fishing vessels continued to decline except for small-sized longliners and large-sized purse seiners. The number of distant-water pole-and-line vessels showed the largest reduction in recent years.

35. The catch of bigeye in the longline fishery decreased in 1993 by 25 per cent while the catch of yellowfin stayed at the same level. The skipjack catch increased by 15 per cent for pole-and-line and by 30 per cent for purse seine. The purse seine catch of yellowfin dropped by 30 per cent. There was no appreciable changes in the general fishing ground or in the mode of operation that might explain these changes in catch composition.

36. 'Coastal' longliners are less than 20 GRT. They mostly fished around Japan, although many of the larger coastal longliners ventured further offshore. They are restricted to waters north of the equator, and rarely fished south of 20°N.

37. The SCTB commended Japan's development of port sampling programmes that were now providing, for example, firm estimates of the amounts of bigeye tuna taken by Japanese pole-and-line and purse seine vessels.

2.1.8 Kiribati

38. Mr Ribanataake Awira presented the report on tuna fisheries in Kiribati. Tuna fishing in Kiribati ranges from subsistence and small-scale artisanal fishery development to domestic commercial fishing, joint ventures and fishing under bilateral and multilateral fishing arrangements. In an effort to improve artisanal catches, the government is promoting the marketing of surplus catch. However, artisanal fishermen are currently experiencing a decline in their catches. Intensive fishing by the purse seiners in Kiribati is being blamed for the decline.

39. The national fishing company now owns four pole-and-line boats, a mothership, and onshore cold storage facilities. Unfortunately, the company has not been particularly successful, with tuna catches fluctuating significantly from year to year, from 400 to 2,300 t a year. Recently, a joint-venture company has commenced developing the domestic tuna purse-seine fishery. To ensure its economic viability, the joint-venture purse seiner is also operating in waters outside Kiribati, such as FSM, PNG and Tuvalu.

2.1.9 Korea

40. Dr Jang Uk Lee presented the report on Korean tuna fisheries. Korea has maintained two types of fishing gears in the Pacific Ocean since 1980: the longline fishery has been active in a wide area between 40°N and 40°S, including the SPC area, and the purse-seine fishery has been operating in equatorial waters of the SPC area. A total of 192 fishing vessels (160 longliners and 32 purse seiners) were active in the Pacific Ocean during 1994. The 1994 total catch from these vessels was reported to be about 228,400 t. Purse seiners accounted for 85 per cent of the catch. The species composition was: 145,541 t skipjack (63.7 per cent), 59,257 t yellowfin (25.9 per cent) and 19,603 t bigeye (8.6 per cent).

41. In 1993, National Fisheries Research and Development Agency (NFRDA) of Korea initiated a sampling programme at domestic ports to obtain biological data, especially on tunas from the purse seine fishery. The programme is collecting data on monthly size composition and reproductive biology of yellowfin and skipjack tuna. NFRDA is also running a scientific observation project to carry out research activities onboard the Korean tuna fishing vessels.

42. The estimates of the Korean longline catch for 1975-1992 (Working Paper 2: Table 12) differ slightly from NFRDA estimates for the SPC statistical area. The SCTB also noted discrepancies between purse seine catch estimates presented by Dr Lee and those in Working Paper 2 for 1993 and 1994; the NFRDA 1993 estimate was about 20,000 t less than the OFP estimate from an industry source, whereas the NFRDA 1994 estimate was about 20,000 t more than the OFP estimate from an industry source. The sum of 1993 and 1994 purse seine catches is the same for both sources of estimates, perhaps suggesting that the discrepancy was related to the time span of the different data sets, e.g. landings versus logsheets.

43. Catch statistics presented by Dr Lee were from logbooks collected from Korean purse seiners. Logbook coverage of Korean purse seiners was believed to be 60 per cent for 1993, compared with 50-70 per cent for Korean longliners.

44. Changes in fishing strategies and area were responsible for variations in species composition of Korean longline catches over the past few years. Albacore catches, for example, had declined significantly while yellowfin catches increased. The decline in the albacore catch was a result of many of the Korean longliners that had targeted albacore being wrecked or damaged by a cyclone in Pago Pago. Recent low catches of albacore were incidental catches by the tropical longline fleet.

2.1.10 New Caledonia

45. Mr Régis Etaix-Bonin presented the report on New Caledonian tuna fisheries. Recent years have seen significant developments in New Caledonia's tuna fleet with small, locally-based longliners beginning to target sashimi quality tuna that is airfreighted to Japan. Since this fish has to be landed fresh, the small longliners operate close to port. With the adoption of monofilament longline, the gear is more effective in catching yellowfin and especially bigeye. Large numbers of small bigeye (under 15kg) are apparent in catches from monofilament longline gear. In 1994, the total catch of tuna and tuna-like species by the six local longliners is estimated to be 1,600 t compared with 1,350 t in 1993. For vessels using monofilament longline gears, about 40 per cent of the total catch (by weight) consists of yellowfin and bigeye.

46. Japanese longliners returned to New Caledonia economic zone in 1994 under a new access arrangement. Some of these were equipped with ARGOS satellite positioning beacons which allows authorities to track the vessels on a real-time basis.

47. The SCTB discussed problems with collecting catch and effort data from New Caledonian longliners. Legislation did not allow transponders to be placed on domestic vessels, and provided little support for logbook programmes. Legislative changes were difficult to introduce because of the complex arrangement of local government. Nevertheless, a proposal for appropriate legislative changes would be developed over the next few months with the intention of submitting it to the New Caledonia Congress.

48. No analysis has yet been done on why there was an apparent increase in small bigeye catches with the monofilament gear used by domestic vessels.

2.1.11 Solomon Islands

49. Mr Diake presented the report on Solomon Islands tuna fisheries. Pole-and-line and purse seining are the main methods used to catch tuna in the Solomon Islands. Pole-and-line fishing commenced in 1972. Longlining was attempted in 1981, but the operation terminated in 1985 because of economic reasons. Following a series of successful fishing trials in the early 1980s, group seining was introduced in 1984, with single seining beginning later in the 1980s. In 1994, the two domestic tuna companies operated 27 pole-and-line vessels. Twelve of the 27 were chartered Okinawan vessels. This was a significant reduction from the 37 pole-and-line vessels that operated in 1991. The reduction was due to the non-licensing of vessels from other SPC member countries and several domestic vessels being decommissioned. A total of 14 purse seiners

operated in the Solomon Islands EEZ in 1994 compared with 10 in 1993. These purse seiners included one group seiner, two single seiners and eleven joint-venture vessels. The joint ventures were not extended at the end of 1994 licensing period.

50. Total landings by domestic tuna vessels in 1994 amounted to 50,150 t. This was a 25 per cent increase on the 1993 catch. About 45 per cent of the tuna landings were from pole-and-line fishing. The pole-and-line landed catch for 1994 was 15 per cent greater than 1993 landings, but 41 per cent lower than the highest recorded catch of 38,822 t in 1986. The high landed figures for 1994 were mainly due to good catches by the single seiners, with the average catch rate of 14.6 t per day the highest on record. The purse-seine catch consisted of 59 per cent skipjack and 40 per cent yellowfin. Bigeye landings by purse seiners have been small and discontinuous over the past years, although this could be partly due to difficulties in differentiating it from yellowfin in the catch.

51. Solomon Island currently has bilateral agreements with the Japanese and Taiwanese allowing pole-and-line and longliners from Japan and longliners from Taiwan to fish in Solomon Islands EEZ. Taiwanese vessels are specifically licensed to fish for albacore tuna and a total allowable catch (TAC) of 1,500 t has been allocated to these vessels. The Ting Hong Fishing Company hopes to operate 50-60 vessels in Solomon Islands EEZ in 1995.

52. Distant-water Taiwanese longline vessels have fished in the Solomon Islands waters since 1980, however, catch and effort logsheets have not been made available. A fleet of 50-60 offshore longliners from the People's Republic of China (PRC) and Taiwan will soon be based in Honiara. Originally Ting Hong was to be the agent for these operations but recent policy decisions in Taiwan have recommended that Ting Hong cease involvement as an agency for the PRC vessels throughout the region.

2.1.12 Taiwan

53. Mr Chung-hai Kwoh presented the report on Republic of China (Taiwan) tuna fisheries. The 1994 reported catch of tunas, billfishes and sharks by Taiwanese vessels in the Pacific Ocean was 250,000 t. Most of this catch was taken by distant-water purse seine vessels (182,000 t), distant-water longline vessels targeting albacore in the south Pacific (22,000 t), and the offshore/coastal sashimi longline fisheries (30,000 t). In the future, it is hoped that further agreement can be reached with Pacific island countries so the Taiwanese purse-seine vessels, for example, can extend their fishing areas in the region.

54. The coastal longline fishery based out of Tung Kang has been difficult to track because of its rapidly changing nature. However, some progress has been made in obtaining logbook data from this fleet, with 376 trips collected for 1993 and 831 trips for 1994. Coverage for the Tung Kang fleet and the offshore fleet is expected to improve in the future, with further rationalization of administrative arrangements and data collection.

55. The SCTB noted the encouraging improvement in logbook coverage of the Taiwanese purse-seine fleet. Coverage of the Taiwanese purse seine fleet had increased significantly, from about 25 per cent in the early 1990s to 96 per cent for 1994.

2.1.13 Tonga

56. Mr Peter Hurrell presented the report on Tongan tuna fisheries. Tonga's first longliner, 'Lofa', a 37 m long, 188 GRT Japanese-style longliner, was acquired in 1981. Fishing operations carried out by the Lofa during 1982-1991, and data from other boats, indicated the commercial feasibility of Tonga-based tuna longlining. The government then transferred ownership of the Lofa to a commercial fishing company, which in turn purchased three more large longliners, to target albacore for canneries in Pago Pago and Levuka. In 1994, the four large longliners averaged 1500-2000 hooks per set. Their 1994 catch rate (3.3 fish per 100 hooks on average) was lower than that in 1993 (3.9 fish per 100 hooks).

57. Five new longliners arrived in Tonga in late 1994. These are smaller than the Lofa, and use monofilament longline gear to target bigeye and yellowfin tuna for fresh sashimi markets in Japan, Hawaii and the US west coast. About 40 per cent of their catch is sold on local markets. The larger longliners land about 20 per cent of their catch locally, with the remainder going to canneries.

58. The SCTB welcomed the presentation of longline statistics in Mr Hurrell's report. Though previously provided on a regular basis, both catch and effort logbook data and annual catch estimates for the Tongan longline fleet have not been provided to the OFP since early 1993. Mr Hurrell suggested that these data could be provided on a regular basis in the future.

2.1.14 United States of America

59. Mr Atilio Coan presented the report on American tuna fisheries in the western Pacific. The US troll fishery for albacore in the south Pacific started in 1986. Fishing usually begins in December of one year and continues until April of the next. Catches peaked in 1991 when 58 vessels caught approximately 5,000 t of albacore. Since then, catches have decreased to 600 t, and the number of vessels to 14 in the 1994 fishery. Catches from this fishery are not anticipated to increase much above 1,000 t in 1995. The increased availability of albacore in the north Pacific and poor fishing in the south Pacific during the last two years have kept the fleet in the north Pacific.

60. The distant-water purse seine fishery operates over a large area of the western Pacific and accounts for approximately 98 per cent of the US central and western Pacific tropical tuna catch. Skipjack tuna is the major portion of the 1994 catch (72 per cent) with lesser amounts of yellowfin tuna (27 per cent) and bigeye tuna (1 per cent). The number of vessels peaked in 1983 at 62, decreased in the late 1980s, and increased to 49 in 1994. Most vessels are of 1,000-1,800 t carrying capacity. The majority of the catch is unloaded directly to canneries in American Samoa (53 per cent) or transshipped from American Samoa or Tinian (42 per cent). Yellowfin tuna catches for the distant-water fishery reached a high of 55,329 t in 1994, while skipjack tuna catches peaked in 1991 at 177,021 t, before declining to 149,000 t in 1994. Bigeye tuna catches, estimated from species composition sampling, ranged from over 3,000 t in 1992 and 1993 to 1,800 t in 1994. Total catch from this fishery in 1995 is anticipated to remain at approximately 210,000 t. The fleet is likely to continue targeting school fish, especially in areas around Jarvis Island, where large yellowfin (> 120 cm fork length) have been caught in past years. Catches of

bigeye tunas are also likely to remain less than 2,000 t. Forty-nine vessels are expected to actively fish in 1995; so far, 41 have fished during the first quarter of 1995. Skipjack tuna catches are well above those in the first quarter of 1994 and yellowfin tuna catches are slightly lower.

61. Hawaii-based commercial fisheries use longline, pole-and-line, troll and handline fishing gears. They produce approximately two per cent of the total US central and western Pacific tropical tuna catch. The longline fishery targets swordfish (62 per cent), yellowfin and bigeye tunas (23 per cent), and the other fisheries target skipjack and yellowfin tunas. Catches peaked in 1988 at 4,900 t and since then have decreased to 4,500 t in 1994. In 1994, bigeye tuna was the majority of the catch (51 per cent) with lesser quantities of yellowfin (36 per cent) and skipjack tunas (13 per cent). Catches in 1995 are anticipated to remain less than 5,000 t.

62. Artisanal fisheries operate within the EEZs of Guam, American Samoa and the Northern Marianas, and account for less than one per cent of the total US central and western Pacific catch of tropical tuna. Catches peaked in 1988 at 312 t and decreased to 250 t in 1994. Skipjack tuna was the major portion of the 1994 catch at 77 per cent with yellowfin tuna at 23 per cent. Catches in 1995 should remain less than 300 t.

63. Mr Awira requested a breakdown of purse-seining operations with respect to fish aggregation devices (FADs). American purse seiners mostly made school sets, and the occasional associated sets were made on natural logs, not man-made FADs. Japanese purse seiners mostly set on natural logs and FADs, with occasional sets on free schools, and whale or whale/shark associated schools. Korea purse-seine operations were similar to Japanese operations, with log and free school sets.

64. The SCTB noted the wide size range of yellowfin in school sets. Large bigeye were generally absent in western Pacific purse-seine catches at present. By comparison, sets on log in the Indian Ocean using deep nets produced increases in catches of large bigeye.

65 National tuna fishery reports were not available for Palau, Papua New Guinea, Marshall Islands and New Zealand.

2.2 Economic overview of tuna developments

66. Mr Kingston presented an economic review of recent tuna industry developments affecting the Forum Fisheries Agency (FFA) and SPC region (Working Paper 8). Discussion centered on the market situation for the purse seine fishery, recent developments in both frozen and fresh longline tuna fisheries, and general developments in regional tuna fisheries and markets.

67. The estimated value of tuna catches from FFA member countries and adjacent fishing zones during 1994 was US$1,660 million, an increase of US$200 million from 1993. The main reasons underlying this improvement were increases in the purse seine catch and purse seine prices, and a significant increase in catches by the fresh sashimi longline vessels. There was also a modest increase in the value of the pole-and-line fishery due to a slight upturn in prices.

68. The price structure for purse seine caught tuna (cannery grade) was characterized as being highly volatile, averaging around US$800/t over the last nine years, with average prices in 1994

above this long-term level. However, it was noted that in real terms, there has been a consistent decline in prices received over the last 10 years.

69. Cannery-level prices in the early half of 1995 slumped dramatically, falling by around 40 per cent in just 4 months to around US$670/t. Although prices have since improved to around the US$800-850/t level, the sudden price downturn led to financial difficulty in various aspects of the industry. At least one cannery has closed (in Puerto Rico) and several vessel operators have been reported to be in financial difficulty.

70. Japanese purse seine tuna prices and markets experienced similar conditions in 1994 and the first half of 1995, albeit with prices at a higher level. This price margin reflects the fact that Japanese purse seine vessels supply a higher quality end-product that is utilized for higher value products, i.e. katsuobushi. Despite this, there is a strong correlation between price movements in Japan and prices in the other markets.

71. The longline fisheries in the region were categorized into distant water freezer vessels and smaller vessel supplying fresh tuna via air freight from regional ports. Generally, the trend appears to be a decrease or stabilization in freezer longline effort and a large increase in the number of fresh longline tuna vessels targeting the Japanese market.

72. Market trends for the longline fisheries were predicted to result in increased supplies of fresh sashimi grade tuna in Japan. Demand in Japan is likely to remain sluggish such that the immediate market outlook is that prices are unlikely to strengthen and might possibly continue to fall. However, it was noted that Pacific island exporters are somewhat cushioned from these depressed market conditions by the appreciation of the Yen in relation to other currencies.

73. The large expansion of the sashimi longline fleet currently occurring may have limited impact on the market price offered in Japan due to the relatively low proportion (20 - 25 per cent) of market supply the Pacific catch makes up. The effect on catch rates of existing operators is a separate issue.

74. Mr Kingston expressed the desire by FFA member countries to benefit more directly from their respective tuna resources in the form of joint venture arrangements, direct harvesting of the resources by domestic industrial fisheries, provisioning of vessels, etc. A new longline supply and processing base is being established in Honiara, and more regional joint venture purse seine agreements are anticipated.

75. A significant development in encouraging growth in the locally-based purse seine industry is the Federated States of Micronesia Arrangement for Regional Fisheries Access. This agreement is essentially an internal multilateral access agreement for purse seine fishing vessels whereby any purse seine vessel that meets certain requirements, i.e. vessel registry, degree of potential monetary benefit to member states, shoreside investment, numbers of locals employed, etc., can gain access to the principal purse seine fishing grounds of the central western Pacific at relatively lower cost than if that vessel were to negotiate separate bilateral access arrangements with the FFA countries concerned. This agreement would be open to all fishing states and not confined to fleets currently operating in the region.

76. FFA member countries are to complement this incentive-based approach by a compulsory decrease in the number of licences available to foreign-based purse seine. In the first instance, a decrease of 10 per cent will be enforced by April 1997, likely followed by subsequent decreases.

77. The question was posed as to whether increases in the standard of living and population levels of other Asian countries may cause a subsequent increase in the demand for sashimi and tuna. Mr Kingston noted that this was already happening and referred to the big increase in sashimi consumption in recent years in South Korea. The possibility of developing alternative tuna products and markets was also mentioned as a way to increase demand for raw product caught in the surface fishery

2.3 Status of stocks

78. Dr John Hampton summarized the latest information concerning the status of the stocks of the four main species of tuna caught in the western and central Pacific Ocean - skipjack, yellowfin, bigeye and albacore (Working Paper 3). This information is based on examination of fishery indicators (CPUE) for any evidence of persistent changes in the stocks which might have been due to fishing activities, together with various analyses of data (tag-recapture models, age-structured models, surplus production models) that have been carried out over the past few years.

79. There is no indication from CPUE time series that the fisheries have significantly impacted the WCPO skipjack stock, but changes in purse seine technology complicate the interpretation of CPUE as an index of abundance. Most of the information comes from SPC tagging experiments which suggest that the current level of exploitation is low to moderate. These comments are largely appropriate for yellowfin also, though the status of the adult stock is more uncertain given the continued decline in the longline CPUE.

80. Longline CPUE for bigeye has been stable over a long period. However, CPUE standardized for changes in targeting shows a significant decline, at least until 1981. Surplus production model analyses suggest that recent catch levels possibly exceed MSY levels, though uncertainties in stock structure and biological parameters hinder reliable assessments.

81. The status of South Pacific albacore is also uncertain. Longline fishery indicators remain depressed despite slight improvements in recent years. An assessment based on an age-structured model shows evidence of two poor year classes corresponding to the 1982-83 and 1986-87 recruits. The availability of the large number of length frequency samples for the surface fishery since 1988 has helped to reduce the uncertainty in the assessments. It was pointed out that the model has recently been extended to include the effects of year class strength on growth and it appears that smaller year classes tend to grow faster. The analysis should be updated with data for 1992-1994 as soon as possible.

82. During the discussion the relation between the decrease in the nominal longline CPUE for yellowfin and the steady nature of the nominal longline CPUE for bigeye was noted and seen to be due to the possible shift in targeting away from yellowfin to bigeye. However, it was also noted that changes in area and/or changes in oceanographic conditions might also be involved in explaining these CPUE patterns.

83. It was also noted that despite large increases in the size of the fisheries since 1970, the stock indicators based on purse seine nominal CPUE indicate no signs of depletion, and in some instances nominal CPUE has inceased over time. It was concluded that nominal CPUE based on purse seine data may not reflect changes in stock abundance. The major difficulty is measuring effective fishing effort, taking account of factors such as improvements in technology over time

84. A question was asked as to whether price may influence the trends in CPUE. However, while price was seen as to influence effort, it was generally concluded not to influence CPUE.

85. The exploitation rates of 0.2 found for the skipjack and yellowfin fisheries were described as low-to-moderate based on the rule of thumb that a fishery is probably fully exploited when an exploitation rates of greater than 0.5 are obtained. As the effects on the stocks of exploitation rates greater than 0.5 remain unknown, a conservative upper limit for exploitation of 0.4 has been used in interpreting stock status based on the assessments.

2.4 Data collection, and status of the SCTB database

86. Mr Tim Lawson, referring to Working Paper 4, provided a status report of the SCTB database. He explained that the SCTB database was created in 1990 as a source of comprehensive tuna fisheries data for the SPC region, with a goal of open access for use by scientists for stock assessment and fisheries evaluation purposes. Through the years, the database has grown to include both public domain and non-public domain data from numerous sources, both SPC member and non-member countries.

87. During the current reporting period, eight requests for aggregated data were received from researchers. Of these requests, one was denied because it was outside of established guidelines. Three involved public domain data and required no special permission for release of the data to the researchers. Four required special handling because they involved non-public domain data. SPC had to forward (via telephone, fax, Peacesat) the requests to the contributors of the data in order to obtain release clearance. This is standard procedure followed by OFP for non-public domain data. Clearance was granted for each of these requests and the data were provided to the researchers.

88. Mr Lawson explained that the clearance process can result in delays with requests that involve non-controversial, but non-public domain data. He felt that the process could be streamlined to minimize the delays. One streamlining suggestion that will be pursued in 1995-96 is that of securing advanced discretional release authority from the sources of aggregated catch and effort data. The authority would be used, at the discretion of the OFP, to release catch and effort data aggregated by 5° latitude by 5° longitude by month, for individual fleets, to researchers who request the data. Other guidelines concerning legitimate use of the released data might also be established by OFP.

ACTION ITEM

> The OFP seek authority from sources of non-public domain data held at SPC to release tuna fishery catch and effort data, broken down by fleet (i.e. fishing nation and gear type, such as Japanese purse seine), but aggregated over all vessels within a fleet and by 5° latitude and

5° longitude and month, to qualified scientists for research purposes, at the discretion of the OFP.

89. It was clear from the report that there has been considerable progress made in creating a database accessible to researchers, but the goal of open access has not yet been achieved. Some participants voiced disappointment with this progress, while others noted that there are some key concerns that will require addressing before open access can be achieved. In particular, some major contributors are non-members of SPC (Japan, Korea and Taiwan) and are voluntarily providing data to the OFP. The data in some cases are considered to be of considerable commercial value to competitors. The contributors, therefore, wish to retain the decision for access and distribution of their data. There are also contributors who obtained the data from fishermen through national authorities and their regulations that do not provide for the transfer of access decision making to a non-fishery management body, such as the SPC. In such cases, the contributor must be involved in access decision making. Finally, there is fear by some that misuse of data could occur without the involvement of contributors in case-by-case decisions on access.

90. In the discussion, there was wide agreement that the database activities have been beneficial in focusing the SCTB in (1) cataloguing available fisheries data of use for stock assessment purposes; (2) understanding confidentiality requirements of contributors of data to the base; (3) identifying public domain or freely accessible data; and (4) fostering greater exchange of data among interested scientists. Although the goal of open access to the base has not yet been achieved, the goal is widely supported and likely to be achieved when the results of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks comes into force. Results of this just-concluded (August 1995) conference appears to take into account many of the concerns of data contributors to the SCTB database, including concerns noted above.

91. Under Agenda Item 2.1.4, Dr Sakagawa suggested that the OFP specify the species of by-catch in Yearbook tables, rather than grouping them in general 'billfish' and 'other species' categories. It was noted that data on landings of by-catch are sometimes available through port sampling programmes, and this could be an area for further work. However, it was more difficult to obtain data on the by-catch rejected at sea, the by-catch retained onboard the fishing vessels for crew consumption or for later sale in home ports, or the by-catch sold locally. The development of observer programmes should assist in estimating annual by-catches for certain fleets active in the region.

ACTION ITEM

The OFP, where possible, include a species breakdown of by-catch in the SPC Tuna Fishery Yearbook tables beyond the current category.

92. The OFP agreed to add two summary tables to the Yearbook: one table of catches by year and species (including percentages), and one table of catches by year and gear. Mr Itano also suggested that in describing longline fisheries, it would be helpful if the OFP, and countries presenting national fisheries reports, might consider characterising each fishery by gear type and targeting, e.g., 'deep longlining targeting bigeye tuna', 'nighttime shallow longlining'.

ACTION ITEM

The OFP add summary tables of catches by year and species (including percentages) and catches by year and gear to the SPC Tuna Fishery Yearbook.

3. OFP WORK PROGRAMME REVIEW 1994-95, AND WORK PLAN FOR 1995-96

93. Dr Lewis introduced this section by noting that Working Paper 5 detailed the OFP Work Programme achievements of 1994-95, and the Work Plan for 1995-96.

3.1 Statistics and monitoring

94. Mr Lawson, OFP Fisheries Statistician, gave an overview of the Programme's statistics and monitoring activities. These activities included:

- maintaining regional tuna fisheries databases (OFP Data Catalogue, Information Paper 1), including catch and effort logsheet data, which covered 1,279 vessels during 1994; the Standing Committee Database; the South Pacific Albacore Research (SPAR) Database; length frequency data; unloading data; and tagging data;

- supporting port sampling programmes to collect unloading data and length frequency data in 14 ports in 11 SPC member countries and territories;

- publishing the quarterly SPC Regional Tuna Bulletin, containing monthly catch and effort statistics determined from logsheet data held at SPC. This has continued uninterrupted since the last quarter of 1988;

- publishing the SPC Tuna Fishery Yearbook, containing estimates of annual catches compiled from various sources;

- providing support for national tuna fishery statistics systems, wherein six member countries and territories were visited by OFP programmers during the current reporting period; and

- liaising with other fisheries agencies concerning fisheries statistics, including the Inter-American Tropical Tuna Commission (IATTC), the Indo-Pacific Tuna Programme (IPTP), and the Food and Agriculture Organization (FAO) of the United Nations.

95. The SCTB reviewed the coverage of each database held by SPC.

96. For the SCTB Database, where information is supplied in aggregated form, the longline coverage of Korea and Taiwan was for the entire Pacific Ocean. Japan provided longline data for distant-water vessels only (not offshore vessels). The Japan pole-and-line and purse-seine data were from south of 20° N. The major sets of data not covered by the Standing Committee Database include Korean and Taiwanese purse seine prior to 1994. Dr Lee stated that the Korean purse-seine data would be provided to the OFP on his return. Unfortunately, historical Taiwanese

purse-seine logbook data have not been compiled by the Taiwanese government and are thus unavailable.

97. Logbook coverage provided by SPC member countries was virtually complete for the Chinese and Taiwanese offshore longline fleets. Coverage of US longliners does not include Hawaii, but does include other US Pacific territories. Logbook coverage for US purse seiners extends to 150° W. Coverage of Korean and Taiwanese purse seiners by logbook data provided to the OFP by SPC members has been high since 1993 in the case of the Taiwanese fleet, and since 1994 for the Korean fleet, with catches reported for both EEZs and adjacent high seas areas.

98. The OFP is in a position to provide raised aggregated data for all major fleets active in the SPC region, and thus for each gear type, if such data are requested. However, for most assessment applications, the data must be broken down by fishing nation and gear type, rather than just gear type, because targeting and catchabilities vary so greatly between fishing nations. Some applications, such as effort standardization, require disaggregated (logbook) data. Furthermore, logbook coverage of each of the fleets in the region varies from excellent (e.g., US purse seine under the Treaty) to very poor or absent; information on data quality is difficult to incorporate in an aggregated database, which further suggests that the uses of a database aggregated by gear type, and not broken down by fishing nation, would be limited.

99. The SCTB noted that Information Paper 5 satisfied Action item 1 of SCTB7—Review and revision of South Pacific regional logbooks. The OFP will distribute the new logbooks for purse seine, pole-and-line and longline immediately following SCTB8. The importance of consultation with the full range of fishermen supplying the data and data users, such as scientists, was emphasised, as was the need to thoroughly appraise the uses of data collected and definitions used in logbook fields. The SCTB noted that OFP's review had addressed these areas, and that further review and refinement of the logbooks were expected over time. Implementation of the logbooks was the responsibility of Pacific island nations and distant-water nations. The OFP envisaged no specific training or instruction programmes in introducing the new logbooks. However, they endeavored to contact fishing companies where consistent problems were identified in submitted logbooks. Fishermen could now indicate the name of their company in the new logbooks, which will assist OFP in providing feedback on logbook problems.

100. The new logbooks included species breakdowns of by-catch and discards. The OFP's review of by-catch in western Pacific tuna fisheries highlighted the poor performance of many commercial fishermen in providing data on bycatch. However, the growing recognition of the importance of this issue was expected to improve reporting of by-catch and discards on logbooks.

101. The SCTB noted that a SPAR meeting was long overdue in view of recent stock assessments, fishery developments, and prospects for developing a multilateral treaty with Taiwan. While aware of the pressure to hold the SPAR meeting as soon as possible, Dr Sakagawa indicated that, because of funding problems, it would be difficult for US scientists to attend a meeting if it was held before December.

ACTION ITEM

> Given the pressing need for an update of albacore resource and data issues, the OFP convene a SPAR meeting as early as possible in 1996.

102. Mr. Sharples, SPR TRAMP Port Sampling and Observer Supervisor, gave an overview of port sampling and observer activities of the OFP. He stressed the current drive towards increasing the scope of and improving standards of port sampling activities through the region. The SPR TRAMP port sampling activities began last year even before recruitment of new SPR TRAMP personnel. Activities have involved:

- providing support to sampling programmes in, Federated States of Micronesia, Fiji, French Polynesia, Guam (offer only), Kiribati, Marshall Islands, New Caledonia, Palau, Papua New Guinea and Solomon Islands;

- providing this support in a variety of forms including technical advice, financial assistance to cover overtime hours for port samplers employed at ports with burgeoning off-loading activity, travel costs, recruitment costs, design and provision of data collection forms, data processing and provision of sampling equipment such as calipers, freezer clothing and a small boat to enable port samplers to get to purse seiners transhipping in Chuuk lagoon;

- running regional and in-country port sampling workshops;

- secondment of an OFP staff member to set-up a port sampling programme in Christmas Island which continues successfully despite constraints due to isolation;

- producing reports to use to evaluate quality of data being collected in port sampling activities, for guidance towards improving techniques and sampling strategies;

- enhancement of the key support role OFP has always had with training FFA's observer programme on U.S. Tuna Treaty purse seiners

103. Roles of the SPR TRAMP, Port Sampler / Observer Supervisor were outlined as follows:

- to promote standardisation of port sampling protocols amongst member states;

- to help co-ordinate regional port sampling activities;

- to promote improved reporting into the Regional database maintained at the OFP;

- to edit a regional port samplers and observers newsletter;

- to manage a small team of highly trained observers.

104. There are just three SPR TRAMP observers soon to be augmented by a fourth. However it is envisaged that the Port Sampler / Observer Supervisor and other OFP staff will also carry out observer duties. It was explained that the primary objective of SPR TRAMP observers is to collect data from fleets from which good resolution data are generally difficult to get and they would work for the OFP strictly as scientific observers with no compliance role. DWFNs that have declared willingness to co-operate fully in implementing good conservation and management practices should then have no difficulty encouraging their fishermen to host SPR TRAMP observers. A secondary objective of SPR TRAMP observers is to support National Observer Programmes of SPC member States. As the declared willingness is slow to become apparent in co-operative action, SPR TRAMP observers are to be placed aboard vessels through provisions in

member States bilateral access agreements to work towards both objectives in an integrated role assisting National Observer Programmes and targeting specific areas of weakness in data collection. However, in this role SPR TRAMP observers will also perform the compliance and surveillance roles that individual member States require.

105. The possibility of utilising the best of the FFA / SPC trained observers for specific research roles within OFP was also raised.

106. Mr Karl Staisch, FFA Observer Manager, provided an overview of the FFA Observer Programme (Background Paper 14). The US Treaty required observer coverage of 20 per cent of US purse seiner trips each year in the Treaty area. In 1994/95 the programme had not quite achieved this target; however, it was noteworthy that observer coverage of vessel days had exceeded 20 per cent. The surveillance and compliance tasks of Treaty observers were not particularly onerous. Consequently, the Programme encouraged the collection of biological data, such as length measurements, which had been passed on to OFP. Mr Staisch felt that the value of the Programme to scientific research and stock assessment could be further upgraded with prudent application of small amounts of training.

107. Superficially, it might seem that there was potential for duplication of length-frequency sampling by observers on US purse seiners with port sampling. However, the SCTB noted that the level of observer coverage of purse-seine operations was low at present. Furthermore, at-sea length-frequency sampling provided important information that was additional to length-frequency data provided by port sampling. The OFP welcomed research projects that might 'piggy-back' on the SPR TRAMP Observer Program. Dr Lewis noted, however, that the Programme had no formal agreement for placing observers on vessels in the region, and that support of additional research projects could not be guaranteed.

ACTION ITEM

> The OFP develop formal agreements with fishery nations for the placement of SPR TRAMP Observers.

3.2 Biological research

108. A summary of biological research conducted by the OFP was presented to the meeting by Dr Hampton. A final summary of the Regional Tuna Tagging Project (RTTP) was given as the number of future tag returns will probably be small. Of the 132,777 tags released 14,728 (11.1 per cent) had been returned as of 30 June 1995. An update of the Albacore Tagging Project was also given with 42 additional returns received over the past year, giving an overall return rate of 1.31 per cent over the four years of the project.

109. A review of by-catch and discards in western Pacific tuna fisheries, commenced in 1991-92, has now been completed and the meeting was invited to comment on a recommendation to proceed with publication as an OFP Technical Report. The need for such a publication was seen as necessary at this time due to the number of requests being received for the information and in order to replace the several drafts of the report which had been distributed earlier. A draft of the report had been made available at the SCTB 7 and the meeting was assured that all requests for changes had been undertaken. While there were some concerns as to the lack of design in the data

collected, it was nevertheless generally agreed that the report should be published, as an SPC Technical Report.

ACTION ITEM

> The OFP publish its review of by-catch and discards in western Pacific tuna fisheries as an OFP Technical Report.

110. The work on the age and growth of tropical tunas was presented next. New work undertaken by Dr Bernard Stequert of L'Institut Français de Recherche Scientifique pour le Développement en Coopération (ORSTOM), using a scanning electron microscope confirmed previous work which suggested that the otoliths of yellowfin and bigeye have readable daily rings. It was noted, however, that while the work undertaken by Dr Alex Wild of the Inter-American Tropical Tuna Commission (IATTC) had been a blind test, the new results were not based on such a test. Efforts to provide such a test had been hindered by Dr Stequert moving to a new position.

111. A more lengthy presentation of the environmental determinants of tuna fishery production in the western equatorial Pacific was presented by Dr Patrick Lehodey, Senior Fisheries Scientist with OFP. An initial descriptive analysis of the relationship between the spatial distribution of pole-and-line and purse seine catches of skipjack and three oceanographic parameters - sea surface temperature, phytoplankton pigment concentration and thermocline depth - was given. This analysis indicates that the 15°C sea surface temperature isotherm represents an absolute boundary of the fisheries, and probably of the population, and that the thermocline depth seems to be correlated with the catch distribution, with higher catches where the thermocline is closer to the surface. An advective model of 1° square/month resolution has also been used to correlate the distribution of skipjack catches with the primary productivity (satellite data for 1982-1987) redistributed by currents over various time lags (to enable the conversion of primary productivity to tuna forage). Results to date indicate that when no spatial and time lags are incorporated there is an inverse relationship between catches and productivity in the equatorial waters of the western Pacific. However, when productivity is re-distributed by monthly currents for several months, there appears to be a concentration of secondary productivity to the west of 180°, i.e. in the region of high skipjack catches.

112. The presentation of the biological research concluded with a description of a genetic study of bigeye tuna stock structure in the Pacific. Samples are currently being collected from at least seven locations across the tropical Pacific Ocean. Microsatellite allele and mtDNA haplotype frequency homogeneity within and among samples will be used as the basis for testing hypotheses regarding bigeye population structure. The meeting was informed that the Commonwealth Scientific and Industrial Research Organisation (CSIRO), who will be undertaking the analytical work, have made significant progress in the development of primers for both bigeye and yellowfin. The discriminatory power of the microsatellite approach is reputedly much greater than that of traditional allozyme approaches, which require an almost total absence of mixing for separate stocks to be detected.

3.3 Assessment and modelling

113. Analyses of RTTP tag data have been updated as more tags have been returned, and the analytical methods have continued to be refined. The estimated exploitation rates for skipjack and yellowfin have not changed significantly from what was reported in last year's report, the estimate for both species being 0.20 with a 95 per cent confidence region of 0.16 to 0.25. It was emphasized that these estimates are averages over the wide area of the RTTP tagging and also over the sizes of fish tagged and recaptured.

114. For yellowfin, the estimate is presumed to be most representative of small (<60 cm fork length) fish. Following a suggestion arising from the previous SCTB, a size structured tag attrition analysis was conducted for yellowfin. The size structured model fit the data much better than the original size-aggregated model. A U-shaped relationship between natural mortality and size was obtained. Fishing mortality was highest for 30-40 cm fish and generally declined steadily with increasing size.

115. In response to concerns about the high estimates of natural mortality for large (>80 cm) yellowfin, Dr Hampton mentioned that the estimates for the larger fish could be biased upward if there is a decreasing vulnerability or decreasing tag reporting rate with size, neither of which are accounted for in the model. It was mentioned, however, that a U-shaped natural mortality schedule is not an unexpected result for any species in nature, including fish. Therefore, the increased natural mortality estimates with size could truly reflect senescence in older fish, and in particular, could reflect the dramatic drop in the ratio of females to males that is known to occur in yellowfin, presumably due to differential mortality.

116. A collaborative effort with Otter Research Ltd. to develop and utilize a movement model has been underway for some time. Results were obtained in 1994-95 from fitting the movement model to skipjack tag data from Skipjack Survey and Assessment Program (SSAP) and RTTP. The principal results are 1) that skipjack movement is best modelled by a combination of advection and diffusion processes rather than by either alone, and 2) that skipjack movement appears to be highly variable with time. Work is currently in progress to extend the geographic extent of the model and to include Japanese skipjack tagging data. It is planned to reparameterize movement in the model so that advection and diffusion processes are related to features of the environment such as sea surface temperature, water currents, or biological productivity.

117. Results of a study of interaction in Kiribati between the artisanal fishery and industrial purse seiners were reported. Two approaches were taken: correlation of catch data from the two fisheries and use of a simulation model parameterized by tag data.

118. Catch correlations on a large spatial scale were generally positive. Negative correlations on a small (1° square) spatial scale, apparent during 1991 to 1993, an *El Nino* period, were the only suggestion of competitive interaction in the catch data. It was suggested that the effect of purse seine catch on artisanal fishing may have resulted from higher than normal purse seine effort during that period or that *El Nino* conditions may have enhanced exchange of fish between artisanal and purse seine fishing areas, i.e. fish are equally available to both at such times, and not concentrated inshore.

119. Simulation results were obtained from experimental manipulation of effort in models running at equilibrium. The results indicated that the average, long term effect of purse seining at average (1989-1993) levels on Kiribati and other artisanal skipjack fisheries may be as much as 10 per cent. Small scale effects might be substantially more than the average. It was suggested that small scale problems could be alleviated by excluding purse seining within approximately 60 nautical miles of areas fished by artisanal fleets.

120. On the question of interaction between surface and longline yellowfin fisheries, no new analytical results were reported beyond those reported to last year's SCTB. At the suggestion of last year's SCTB, attempts to tag longline caught yellowfin have commenced, and a few exploratory cruises have been conducted aboard longline vessels in Micronesian waters. If such tagging is shown to be feasible, it is hoped that Micronesian Maritime Authority observers can be trained to routinely tag yellowfin on such vessels.

121. A question arose about the variety of longline fishing styles (depth of set, time of day, use of light sticks, etc.). It would undoubtedly be of interest to disaggregate the longline tag data by set type, but there are not enough longline returns to do so.

122. A proposal to develop an integrated model for yellowfin assessment has been funded within the past year by the Pelagic Fisheries Research Program of the University of Hawaii. Details on plans for implementing this project will be reported to the meeting of the Western Pacific Yellowfin Research Group.

123. Also funded this year is a three year project to incorporate economic features in the developing biological models so that questions of managing for optimum economic benefit can be pursued. This is a collaborative project between the OFP, the University of Queensland, and the FFA. Funding is by the Australian Center for International Agricultural Research (ACIAR).

124. The OFP has begun work on two aspects of this project, one being the use of an existing model of skipjack movement in relation to FADs and islands in the Solomon Islands. This model has now been applied to yellowfin by fitting it to RTTP tag data for yellowfin in the Solomon Islands. The model will be adapted to include fish prices and operating costs so as to explore the effects of various regimes of effort and FAD deployment on profitability.

125. A second aspect of the project is the development of a regional simulation model covering the central and western Pacific with age structure and movement of multiple species (skipjack, yellowfin, and bigeye), and with harvest by multiple gears (purse seine, pole-and-line, and longline). OFP Senior Fisheries Scientist, Dr. Michel Bertignac, presented the considerable progress he has made to date in constructing this model.

126. Some progress was reported on a new version of the South Pacific Albacore Research Catch-at-length Estimation (SPARCLE) model, which makes growth rates dependent on year-class strength. Preliminary results show the new version fitting the data significantly better than the previous version, indicating that growth rates of albacore may be sensitive to year-class strength. Testing of SPARCLE with simulated data sets is in progress.

127. Fishery assessments for some individual member countries have been conducted by the OFP at the request of those countries. Reports of assessments for Fiji and for Palau were completed in

the past year. Requests for three other countries are pending, but funding constraints are impeding recruitment of a research scientist to undertake this work on a full time basis.

128. A major undertaking in recent years by the OFP has been the consultation work to the Philippines Government to initiate the Philippines Tuna Research Project (PTRP). An intensive tagging program was carried out in Philippine waters to assess and quantify the local exploitation rates of tunas and their effects on fisheries in adjacent waters. Also, monitoring procedures to measure catch, effort and size composition from the fishery were established, so that ongoing assessment of the stocks will be possible. Results from the Philippine tagging program, which were presented at last year's meeting, showed that the exploitation rate for skipjack, yellowfin and bigeye by the Philippine domestic fishery was high. Copies of this report are available on request.

3.4 Reporting and liaison

129. During 1994-95 the OFP reported its work to many sub-regional/regional meetings, such as the SPC Committee on Representative Governments and Administrations (CRGA), the Forum Fisheries Committee (FFC), the 15th Annual Meeting of Parties to the Nauru Agreement, and SCTB7, and specialist research groups such as the Western Pacific Yellowfin Research Group (WPYR). Regular liaison was maintained with other regional and international organizations.

130. The OFP Fisheries Statistician attended the Sixteenth Session of the Coordinating Working Party on Fishery Statistics (CWP) in March 1995; the CWP, which includes the fisheries statisticians from several international fishery organisations, meets every three years to discuss fisheries statistics issues of global significance.

4. FINANCIAL AND STAFFING STATUS OF THE OFP

131. The Oceanic Fisheries Coordinator described the SCTB 6 directive to the OFP to supply information on programme finances and budgets that would be useful toward informed consideration of work plans, accomplishments and priorities. He then presented an historical synopsis of OFP funding, which received the bulk of its funding from four traditional donors, i.e. Australia (AusAID), France, New Zealand and the United States Agency for International Development (USAID) for the period 1981 to 1991. With a significant decrease in USAID funding in 1991, other sources of funding were secured from the European Community, International Centre for Ocean Development (ICOD) and innovative arrangements for receiving funds on a technical consultative basis from other organizations.

132. On July 1, 1994, the European Union-funded South Pacific Regional Tuna Resource Assessment and Monitoring Project (SPR TRAMP) began with assured funding of 5 million ECUs over a five year period. This program will implement continuous scientific monitoring of regional tuna fisheries through increased port sampling and at-sea observer placements, and continue to refine and extend existing stock assessments.

133. The financial year of the OFP runs from October through September of each year rather than a traditional calendar year. Year 13 (1 Oct 93 - 30 Sep 94) concluded with a considerable surplus of 140,000 CFP units due primarily to an increase in support from France, continued

support from New Zealand, final funding support from USAID, the third year of a four year financial commitment from AusAID and the final year of a three year technical consultancy to the Philippines (Philippine Tuna Research Project). However, this surplus in funding should be regarded as a stockpiling of funds toward expected expenses in Year 14, including possible recruitment of positions currently unfilled, such as two senior scientist positions.

134. The Year 14 situation was described as good but three key positions remained unfilled. Funding shortfalls have been at least partly covered by increased Australian support for the OFC position. It is anticipated that Year 14 will conclude with a small surplus which may allow recruitment of a tuna programme secretary. SPR TRAMP funding is flowing in well and will continue at a level that will equal or exceed the OFP central budget during most years.

135. The outlook for Year 15 was given as positive with SPR TRAMP assured, one more year of AusAID funding, and expectations that contributions from New Zealand and France will continue at existing levels. The OFC stated that the OFP may need to take a serious look at more 'user pays' systems for services to member countries, as flagged by SCTB 7.

136. The OFC then described the current OFP staffing situation. All of the OFP positions are now tied to particular funding sources. A Senior Fisheries Scientist (Modeller), Senior Fisheries Scientist (visiting) and Fisheries Research Scientist position remain unfilled. For SPR TRAMP, a fourth observer and one biological technician will be recruited this year.

137. The three most senior OFP positions were slated to experience considerable decrease in salary levels at the end of existing contracts, with the OFC position dropping by approximately 25 per cent.

138. The Chairman sought clarification as to the result of SCTB 6 Recommendation 2 which supported the core finding of the OFC position. This issue was raised at the last CRGA (Port Vila, 24-25 October 1994) and, although most countries were sympathetic to OFP's situation, it failed to gain the support of all the member countries. It is hoped that the issue may be reintroduced if further core funding becomes available in the future.

139. Dr Sibert questioned the rational for down-grading salary levels of senior program scientists. This was the result of an review exercise to standardize terms and conditions among the Pacific regional organizations which recategorized these positions as Professional rather than Management. Dr. Hampton noted that a new set of terms and conditions may come into effect by the time that current positions expire. At that time, it might be possible to reconsider salary levels for key OFP positions.

140. Support of the OFP was voiced by Mr. Sharma who felt that SPC management should give more support and consideration to OFP in light of the work accomplished and considerable funding that the programme attracts. Dr. Lewis suggested that the SCTB could not have official direct input to this matter but urged SCTB member countries to seek support from their representatives to CRGA and Conference. In particular, support for the core funding of the OFC position was noted.

RECOMMENDATION

SCTB urged the OFP to continue efforts to secure a long term funding base for the program.

5. PRIORITISATION OF OFP ACTIVITIES

141. The SCTB subcommittee on prioritization was tasked with the responsibility of identifying activities to be maintained in the event that budgetary constraints required reductions in the OFP work programme. Logistical difficulties prevented the full subcommittee from completing its task. However a subset of the subcommittee met recently and prepared Working Paper 9. Three levels of priority were developed on the basis of fisheries considerations.

- Priority 1. Essential ongoing activities of fundamental importance.
- Priority 2. Important activities of potentially very high priority which could be conducted intermittently.
- Priority 3. Useful activities that should be undertaken if funds become available.

142. The sub-committee sought to identify those priority 1 tasks that did not have assured funding for the next 5 years, as it is these activities which will have to find alternative finding should the financial contributions to the OFP diminish.

143. Four activities were accorded Level 1 priority: Task 1 (Long term commitment to the maintenance of a catch and effort logbook database, Not Funded), Task 25 (Maintain collaborative links with regional and international organizations involved in oceanic and tuna fisheries matters, Not Funded), Task 21 (Provision of scientific advice on the status of stocks on a regular basis to member countries and/or to an appropriate management body, Funded) and Tasks 16,17,18 (Development of integrated models for stock assessment of tuna species, Funded).

144. SCTB generally accepted the priorities developed. In the ensuing discussion, it was pointed out that monitoring technological advances in the fishery and evaluating the implications of these advances for fishery management should be an important OFP activity. The possibility of combining several tasks into more unified activities was also discussed.

RECOMMENDATION

The OFP should secure, as a priority, funding support for those activities identified as high priority, but not currently funded.

6. REGIONAL/INTERNATIONAL DEVELOPMENTS IMPACTING ON THE OFP

145. Dr Lewis introduced Working Paper 7 identifying a number of regional and international developments likely to impact the activities of the OFP.

6.1 Outcomes of the Multilateral High-Level Conference on South Pacific Tuna Fisheries

146. The meeting noted that, as directed by SCTB7, the OFP had been responsible for preparing papers on the status of stocks and collection and exchange of data for the Multilateral High Level Conference (Honiara, 5-9 December 1994). These papers were not SPC papers but consensus papers designed to reflect the views of SCTB. OFP was thanked for its efforts in preparing and presenting these papers.

147. It was noted that the Conference had agreed to hold a technical consultation to discuss data issues in more detail. Initially scheduled to precede this meeting of SCTB, the consultation will now be held in early 1996. It was noted that several issues pertaining to the technical discussions still need to be resolved.

6.2 Review of Institutional Arrangements in the Marine Sector

148. The meeting noted that the final report of the review of institutional arrangements in the marine sector in the South Pacific region has been recently completed and will be formally be discussed at the Forum Officials Committee meeting in Papua New Guinea in September. The report will consider a range of issues likely to impact the OFP, particularly regarding the future of the statistical program and possible follow-up to the December High Level meeting.

149. Dr Lewis commented that the review team had generally been supportive of the role of SCTB and the other scientific consultative groups (such as WPYRG). When asked about the scope of the review, Dr Lewis noted members of the review team had consulted with representatives from 22 SPC countries and territories during the course of the study. However, as it is was largely an internal review, SCTB members external to the region were not consulted.

150. A number of recent developments regarding fisheries access arrangements in the region were recognized as having the potential to impact upon OFP's activities, particularly in terms of reporting, data collection and exchange. However, it was recognized that these discussions are at a very early stage.

6.3 UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks

151. From the international arena, it was recognized that the recent conclusion of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the imminent conclusion of the Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fishing would impact upon the future of the OFP. For example, the emphasis that the UN Conference has attached to applying compatible management measures in the high seas and EEZ areas might necessitate future scientific modelling to be undertaken on a finer resolution and to give greater recognition to spatial aspects. It was recognized that this also has implications for the future form and type of data that needs to be collected.

152. Kiribati noted that these international developments may impact upon the role and nature of future management arrangements in the region and that such changes would require careful consideration.

153. Mr Kwoh delivered a statement (Background Paper 16) in which he welcomed the recent international initiatives to promote responsible fishing practices in the world's fisheries. Mr Kwoh noted that Taiwan, one of the leading fishing nations in the South Pacific and throughout the world, looks forward to working with other fishing nations and the coastal states in the Pacific region to promote more effective management of the tuna resources.

6.4 Interim Scientific Committee on North Pacific Tuna and Tuna-Like Species

154. Dr Sakagawa outlined recent initiatives from Japan and the United States to promote more effective management of the tuna resources of the North Pacific. These recent developments build on the previous activities of an informal scientific working group that provided information and advice to the countries involved and to the general public regarding the current stocks and developments likely to impact upon northern Pacific albacore. Earlier in the year the informal working group met in Taipei and decided to continue its activities for the present time pending further developments of the interim committee.

155. Dr Sakagawa noted that the area of competence for the organisation remained unresolved, one view being the entire range of northern Pacific albacore. It is envisaged that the Committee will be responsible for broadbill swordfish and northern Pacific bluefin in addition to albacore.

6.5 Alternative Methods for Data Collection and Dissemination

156. Mr Katsuyama presented three possible options for alternative institutional arrangements for data collection and dissemination and for scientific research in the South Pacific region (Appendix 2). The Chairman thanked Mr Katsuyama for presenting these options and noted that they would make a valuable contribution to future discussions on this important issue.

7. REPORTS BY OTHER ORGANISATIONS

7.1 Food and Agriculture Organization of the United Nations

157. Dr Jacek Majkowski briefly reported on the 2nd FAO Consultation on Interaction in Pacific Tuna Fisheries, which was held in January, 1995 in Shimizu Japan. Some studies funded in conjunction with that consultation are still being completed as is the report of the consultation and the collection of papers presented at the consultation. Draft copies of the report have been circulated widely. Majkowski noted that some consultation funds are still unspent and asked for suggestions on the use of those funds.

158. Dr Majkowski also discussed an atlas of Pacific tuna fisheries, which is to be published by FAO. Several countries have already contributed data for the atlas. The format of the data base for the atlas is still under discussion as is the final list of species to be included.

7.2 Indo-Pacific Tuna Development and Management Programme (IPTP)

159. Mr David Ardill presented the current situation of IPTP and other regional tuna organizations in the Indian Ocean (Background Paper 18). An agreement has been concluded to form an Indian Ocean Tuna Commission (IOTC). It is anticipated that the required 10 member countries will soon have acceded to the agreement to bring it into force. Decisions remain as to

budgeting and location of the new IOTC. It is hoped that IOTC will be functioning independently of FAO funding within two years, at which time the IPTP will disappear.

160. Mr Ardill mentioned that a tuna fishery Atlas for the Indian Ocean is close to completion.

161. In response to a question about the status of an Indian Ocean tagging programme, Mr Ardill said the funding for the tagging programme is on hold until the IOTC is established. It is hoped that at least some of the tagging will be of longline caught fish.

7.3 Pelagic Fisheries Research Program, University of Hawaii

162. Dr Sibert presented information on the Pelagic Fisheries Research Program (PFRP) at the University of Hawaii (Background Paper 19). The PFRP currently supports more than 25 different research projects on different aspects of pelagic fisheries. These projects investigate problems in the areas of biology, oceanography, economics, anthropology and statistics. Several projects are regional in scope and involve collaboration with OFP scientists. A series of seminars reporting the results of these projects will be held in Honolulu on November 28 - 30, 1995.

7.4 Western Pacific Regional Fishery Management Council

163. Ms Kitty Simonds presented a summary on the work of the Western Pacific Regional Fishery Management Program (Background Paper 20), which is responsible for managing fisheries in the EEZs of all US Pacific Islands. The council has fishery management plans (FMPs) for pelagics, bottomfish, crustaceans and precious coral fisheries. Pelagic fisheries have grown most rapidly over the past decade and are the Council's largest program. The value of fish landed or transhipped through ports of the US western Pacific region is among the highest in the nation.

164. The Council follows a set of seven principles which guide its management philosophy, First is a cautionary management approach to maintain healthy fish stocks. A second principle is the goal to obtain the most complete data and quality science. A third principle is an emphasis on public participation. A fourth principle is an ecosystem-wide conservation ethic. A fifth principle is promotion of sustainable and equitable fisheries. A sixth principle is the goal to achieve the most effective enforcement. A seventh principle is a recognition of the social and cultural aspects of fisheries.

165. The above principles have and will continue to shape the decision-making process as the Council addresses issues in the fisheries. Adherence to these principles has enabled the Council to be largely successful and proactive in establishing regulations. However, numerous challenges remain, for example : more complete and accurate fisheries data is needed; international co-operation in Pacific-wide management is becoming imperative; and indigenous fishing communities require greater attention. The Council offers SPC countries its support and welcomes the exchange of innovative ideas to manage our common Pacific pelagic resources as productively as possible.

8. OTHER BUSINESS

166. Discussion then focused on whether the current format of Standing Committee was adequate. Comment was made that the presentations of some of the more interesting parts of the OFP work programme had been not been given the time they deserved for discussion of underlying hypothesis or alternative approaches. Suggestions were sought as to how to rectify this problem. It was suggested that for projects covering two or more year time spans, their presentations could be made at every second or third SCTB meeting. It was pointed out that the presentations of country reports took up a long portion of this meeting, and dropping or streamlining that agenda item would allow more time for presentation of OFP projects. However it was generally agreed that the country presentations were valuable as an opportunity to find out what was happening from the people on the scene. Also SCTB provided the best forum for these presentations, and the agenda item grew from a suggestion at the last SCTB meeting.

167. Dr Hampton suggested that Standing Committee could pick one aspect of the OFP work programme each year to concentrate on, and present detailed analyses of work in this area, perhaps other organisations being invited to present their similar work. Dr Sakagawa suggested spending a day on covering an overview (including overall work program and country reports), a day on a theme topic, and a day on review, recommendations and administration. However, he stressed that this would put considerable pressure on OFP to exert good control of the meeting as this would be a tough schedule. Other suggestions were for longer days or night sessions, or adding some more days to the meeting. Concise reporting and inclusion of night sessions for more specialized topics should be considered.

168. The Chairman asked that these ideas be considered by a sub-committee consisting of Dr Sibert, Dr Sakagawa, Dr Lewis, Mr Diake and an FSM representative for introduction at the next SCTB. Any further suggestions should be directed to this sub-committee.

ACTION ITEM

> A sub-committee (Drs. Sibert, Sakagawa, Lewis, Mr Diake, and a representative from FSM) will consider options for a revised SCTB meeting format for introduction in 1996.

169. Dr Lewis raised the issue that Standing Committees usually arrive at a series of recommendations for the OFP but this had not happened this year. He asked Standing Committee if the OFP could have mandate to tease some direction out from the record of discussion. The Chairman suggested that a participants' review of the draft report would provide suitable guidance.

170. As SCTB reports to RTMF, the timing of the next RTMF was discussed by SPC's Manager of Fisheries, Mr Julian Dashwood. Although the last meeting was in March 1994, it may return to its original timing of August for next year. This may be more suitable for those attending a Coral Reef meeting in Brisbane scheduled for July 1996. SCTB considered that if the next RTMF was in August, then it might be appropriate to move the next SCTB back to June, the month during which SCTB was held from 1988 until the August 1994 meeting of SCTB7 in Koror, Palau.

171. Before closing it was clarified that the OFP report on tuna, by-catch and discards still needed to go through in-house editing procedures before final publication. Hence there was room for any last minute comment or contribution to be considered.

III. REVIEW OF SCTB7 RECOMMENDATIONS AND ACTION ITEMS

RECOMMENDATION 1

In order to simplify the submission of catch and effort data by tuna fishing vessels in the region, and to simplify the processing of catch and effort data, that all SPC and FFA member countries and territories strive to adopt standard logsheets, including future revisions of standard logsheets if and when they become available, for use both by domestic fisheries and foreign fishing vessels operating under access agreements.

This recommendation was discussed in CRGA 21 in Port Vila in October 1994. It was decided to defer further consideration of this issue until countries and territories have had consultations with the relevant national authorities.

RECOMMENDATION 2

That the Secretariat take steps to ensure that the position of Oceanic Fisheries Coordinator is filled, and that consideration be given to funding the position from SPC core funds, in line with SPC policy for other similar positions.

CRGA 21 was unable to reach consensus on the use of core funds to support the position of OFC. The meeting however encouraged the Secretariat to continue seeking non-core funding support for the position. Australia (AusAID) subsequently advised that some of its extra-budgetary funding contribution to SPC could be used for this purpose.

ACTION ITEM 1

That the SPC Oceanic Fisheries Programme review and, if necessary, revise the SPC catch and effort logsheets, in consultation with member countries and territories, the Forum Fisheries Agency and scientists from distant-water fishing nations.

The logbooks were reviewed by the OFP and draft revised logbooks were distributed to all SPC member countries and territories, distant-water fishing nations, and the Forum Fisheries Agency, in January 1995. The draft logbooks were further revised on the basis of comments received from eleven colleagues. The revised logbooks, now termed the 'South Pacific Regional' logbooks, were presented to SCTB8 in Information Paper 5.

ACTION ITEM 2

The SPC Oceanic Fisheries Programme will incorporate comments from members of the Standing Committee into the report on by-catch and discards. Before publication as an OFP Technical Report, the OFP will subsequently distribute the by-catch and discards report as an OFP Internal Report to members of the Standing Committee and SPC member countries and territories.

The report on by-catch and discards was distributed, as an OFP Internal Report to members of the Standing Committee and SPC member countries and territories in March 1995 for further comment.

One outstanding modification to the report was raised during SCTB 8 and this was noted as work required towards publication as an OFP Technical Report, which should be now completed by December 1995.

ACTION ITEM 3

A small group comprising the Oceanic Fisheries Coordinator, Mr Kevin McLoughlin (Australia), Dr Pierre Kleiber (United States of America), Mr Craig Heberer (Federated States of Micronesia) and Mr Joel Opnai (Papua New Guinea) prioritize the activities in the work plan of the SPC Oceanic Fisheries Programme. The impact of various options on the work of the OFP and the provision of services to member countries (as outlined in the Strategic Plan) should be considered. The group will report to the SCTB Chairman, who will in turn report the findings to the next RTMF.

The small group, known hereinafter as the Priorities Sub-Committee, met formally following SCTB 7, and after some discussion agreed to continue its work by correspondence. This proved difficult however, with some of the Sub-Committee members moving to work in different fields or different organisations. A new Sub-Committee of slightly different composition than its original form, met prior to SCTB 8 and prepared Working Paper 9, which was presented at the meeting by Dr Tony Lewis.

ACTION ITEM 4

That the SPC Oceanic Fisheries Programme, in collaboration with all participants in the Standing Committee who may wish to be consulted, prepare background papers on agenda item 1, Status of the Stocks, and agenda item 2, Collection and Exchange of Catch Data, as a Standing Committee contribution to the Multilateral High Level Conference on South Pacific Tuna Fisheries, to be held from 5 to 7 December 1994 at the Forum Fisheries Agency Conference Centre, Honiara, Solomon Islands, as requested by the organisers of the conference.

Consensus papers for the first two agenda items were prepared and presented on behalf of SCTB and OFP. The two consensus papers are available as Information Papers 3 and 4.

IV. SCTB8 RECOMMENDATIONS

RECOMMENDATION 1

SCTB urged the OFP to continue efforts to secure a long term funding base for the program.

RECOMMENDATION 2

The OFP should secure, as a priority funding support for those activities identified as high priority, but not currently funded.

V. SCTB8 ACTION ITEMS

ACTION ITEM 1

The OFP seek authority from sources of non-public domain data held at SPC to release tuna fishery catch and effort data, broken down by fleet (i.e. fishing nation and gear type, such as Japanese purse seine), but aggregated over all vessels within a fleet and by 5° latitude and 5° longitude and month, to qualified scientists for research purposes, at the discretion of the OFP.

ACTION ITEM 2

The OFP, where possible, include a species breakdown of by-catch in the SPC Tuna Fishery Yearbook tables beyond the current "other species" category.

ACTION ITEM 3

The OFP add summary tables of catches by year and species (including percentages) and catches by year and gear to the SPC Tuna Fishery Yearbook.

ACTION ITEM 4

Given the pressing need for an update of albacore resource and data issues, the OFP convene a SPAR meeting as early as possible in 1996.

ACTION ITEM 5

The OFP develop formal agreements with fishery nations for the placement of SPR TRAMP Observers.

ACTION ITEM 6

The OFP publish its review of by-catch and discards in western Pacific tuna fisheries as an OFP Technical Report.

ACTION ITEM 7

A sub-committee (Drs. Sibert, Sakagawa, Lewis, Mr Diake, and a representative from FSM) will consider options for a revised SCTB meeting format for introduction in 1996.

VI. LIST OF PAPERS

LIST OF WORKING PAPERS

WP 1 Report of the Seventh Standing Committee on Tuna and Billfish

WP 2 Tuna Catch Statistics for the SPC Statistical Area, including Preliminary Estimates for 1994.

WP 3 Status of Tuna Stocks in the Western and Central Pacific Ocean.

WP.4 Operation of the Standing Committee Database

WP 5 OFP Work Programme Review, 1994-95, and Work Plan, 1995-96

WP 6 OFP financial and staffing status

WP 7 Regional and International Developments impacting the OFP

WP 8 Economic overview of tuna industry developments

WP 9 OFP Work Programme Priorities - Report of the Sub-Committee

INFORMATION PAPERS (numbers 2-4 and 6 not tabled, available on request)

INF 1 OFP Data Catalogue

INF 2 Report of the FFA/SPC Observer Workshop

INF 3 Record of Proceedings of the Multilateral High-Level Conference on South Pacific Tuna Fisheries

INF 4 Status of stocks (SCTB papers to the MHLC)

INF 5 A review of catch and effort logbooks for longline, pole-and-line and purse seine

INF 6 Collection and exchange of catch data (SCTB paper to the MHLC)

BACKGROUND PAPERS

1. Tuna and Billfish of the North-Eastern Australian Fishing Zone

2. National Fisheries Report - Federated States of Micronesia

3. Status of Tuna Fishery in Fiji

4. National Fisheries Report French Polynesia

5. Indonesian Fisheries for Tuna in the Western Pacific-Eastern Indonesia

6. The Japanese Tuna Fisheries in the Western Pacific Ocean

7. National Paper for Kiribati

8. Korean Tuna Fishery and Research Activity

9. Update on Tuna Fishing in New Caledonia

10. National Fisheries Report Solomon Islands

11. National Fisheries Report Taiwan

12. National Fisheries Report Tonga

13. U.S. Fisheries Catching Tropical Tunas in the Central-Western Pacific Ocean, 1993-1994

14. South Pacific Forum Fisheries Agency, 7th Licensing Period Observer Programme Report

15. United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks - 6th Session, New York, July 24 - 4 August 1995

16. Taiwan Statement

17. Information Paper on the FAO Atlas of Pacific Tunas

18. Status and Inter-relations of Tuna Management bodies in the Indian Ocean

19. Status Report : Pelagic Fisheries Research Program, University of Hawaii

20. Managing Fishery Management The Operations of the Western Pacific Regional Fishery Management Council

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APPENDIX I

OPENING STATEMENT BY THE SECRETARY GENERAL, ATI GEORGE SOKOMANU

Ladies and gentlemen, distinguished colleagues and scientists from all parts of the Pacific and beyond,

I have great pleasure in warmly welcoming you today to this Eighth Standing Committee on Tuna and Billfish and next week, the Fifth Western Pacific Yellowfin Research Group. It is a particular pleasure to host this important series of meetings in our new location and in this impressive conference centre. On the shores of the so-called "most beautiful lagoon on the world", it is certainly an appropriate location for your important deliberations. Indeed, it is the great degree of interest shown in this meeting, as evidenced by the presence of 30 or so of you here, that sees us meeting in this conference hall. It is gratifying to see you all here, at your own resources, and to welcome some of you, such as the Republic of Korea, for the first time.

Standing Committee, as you are aware, has met annually since 1988 to provide scientific review of the work of the Oceanic Fisheries Programme, to assist the programme in the acquisition of fisheries data from the region and adjacent areas, and to encourage collaborative research on relevant topics. As the tuna resources of the region are of fundamental importance to our island countries and territories, their rational and sustainable exploitation is a high priority for most of our member countries. This is a priority reflected in the current Forum theme - responsible management of our resources, notably fisheries and forests. The Oceanic Fisheries Programme, the largest programme within the Commission, undertakes on behalf of our member countries, the research and monitoring leading to the provision of sound scientific advice for the management of regional tuna stocks. Standing Committee has, and will continue to play, an important role in guiding the work activities of the OFP.

This Standing Committee Meeting, which is currently the only gathering regularly bringing together most coastal states and fishing nations active in the harvest of tuna resources of the region, occurs at an interesting time. The UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks has just concluded its deliberations in New York, undoubtedly with a range of implications for data collection activities, co-operation in stock assessment, and the form and functions of regional organizations concerned with international tuna fisheries. Within the region, the convening of the Multilateral High-Level Conference on South Pacific Tuna Fisheries in December of last year in Honiara underlined the important role of the OFP and the SCTB in the consultative process relating to conservation and management of tuna stocks. At the same time, the region is examining the role of its own various organizations in the marine sector, through an institutional review. The future and form of the OFP itself is an issue addressed by this review.

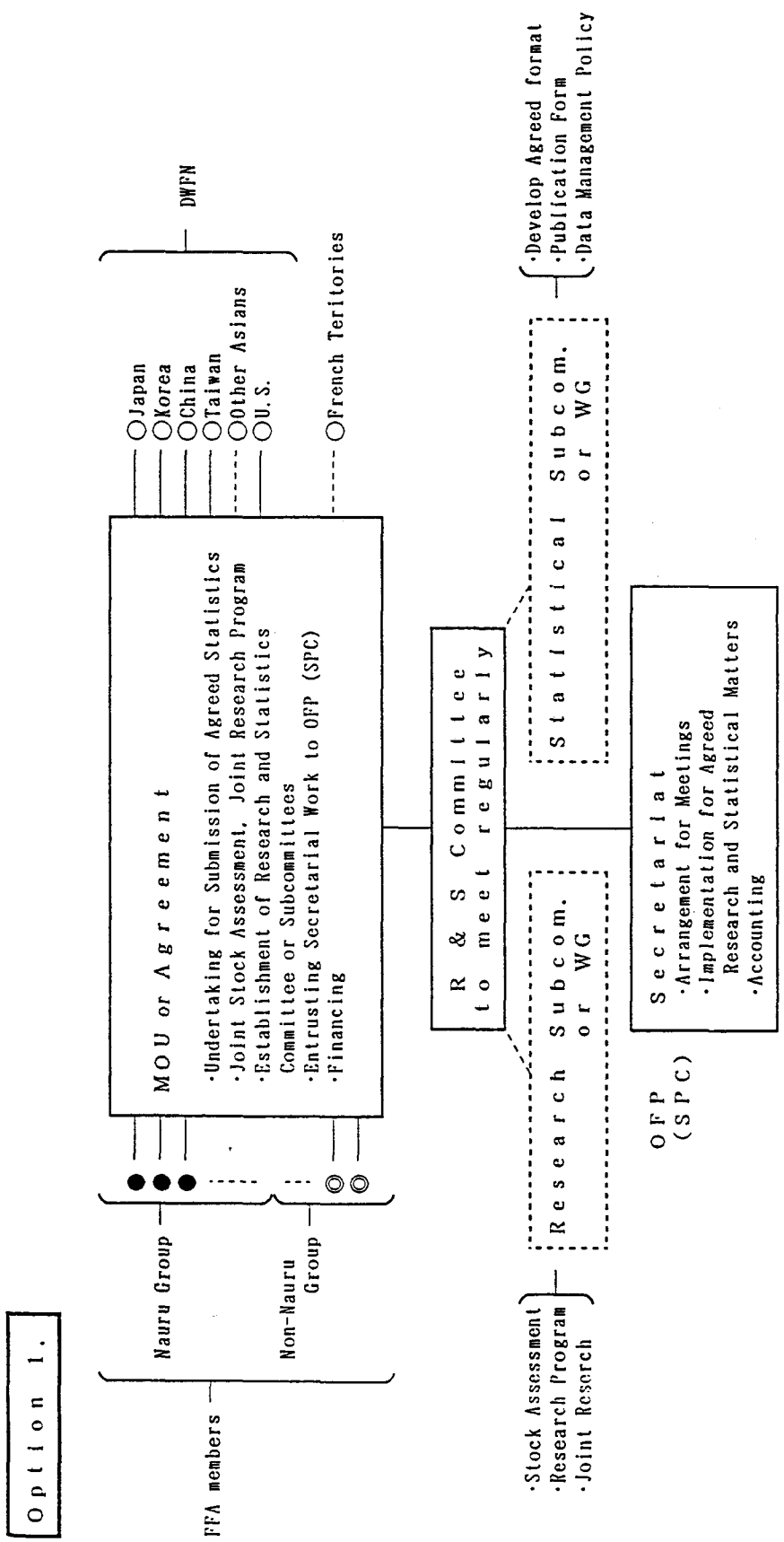
The work of the OFP continues to develop, most recently with the initiation of the five-year SPR TRAMP, which will see continuous scientific monitoring of the region's tuna fisheries gradually implemented. The Western Pacific Yellowfin Research Group (WPYRG) was established in response to rapid increases in the catch of yellowfin tuna in the region, and to undertake collaborative assessment of the stock condition. It will also expand its activities this year to include the valuable bigeye tuna, another source of concern in some quarters.

I can assure you that these two meetings are important to our member countries and we ourselves appreciate the input and support that SCTB provides to the OFP. I therefore wish you well in your

discussions, and again welcome you to our new home. It is five years since a Standing Committee has been held in Noumea, so I hope it will be memorable one for you all.

APPENDIX II

OPTIONS FOR RESEARCH AND STATISTICS FOR WESTERN PACIFIC TUNA FISHERIES PROPOSED BY THE FISHERIES AGENCY OF JAPAN



Participation : All the coastal nations and entities in the region and all the nations and entities fishing in the region will sign and become parties to this arrangement.

Financing : The cost required for this arrangement which is above the regular budget of OFP (SPC) will be borne by participating nations and entities in proportion to their catch of tuna and tuna-like species in the region.

Alternative : ① Coastal States members may be divided in two groups ; namely Nauru Group members whose participation is essential and others who can participate on optional basis
② Secretariat can be a newly created one, or, more preferably, present OFP separated from SPC if circumstances allow.

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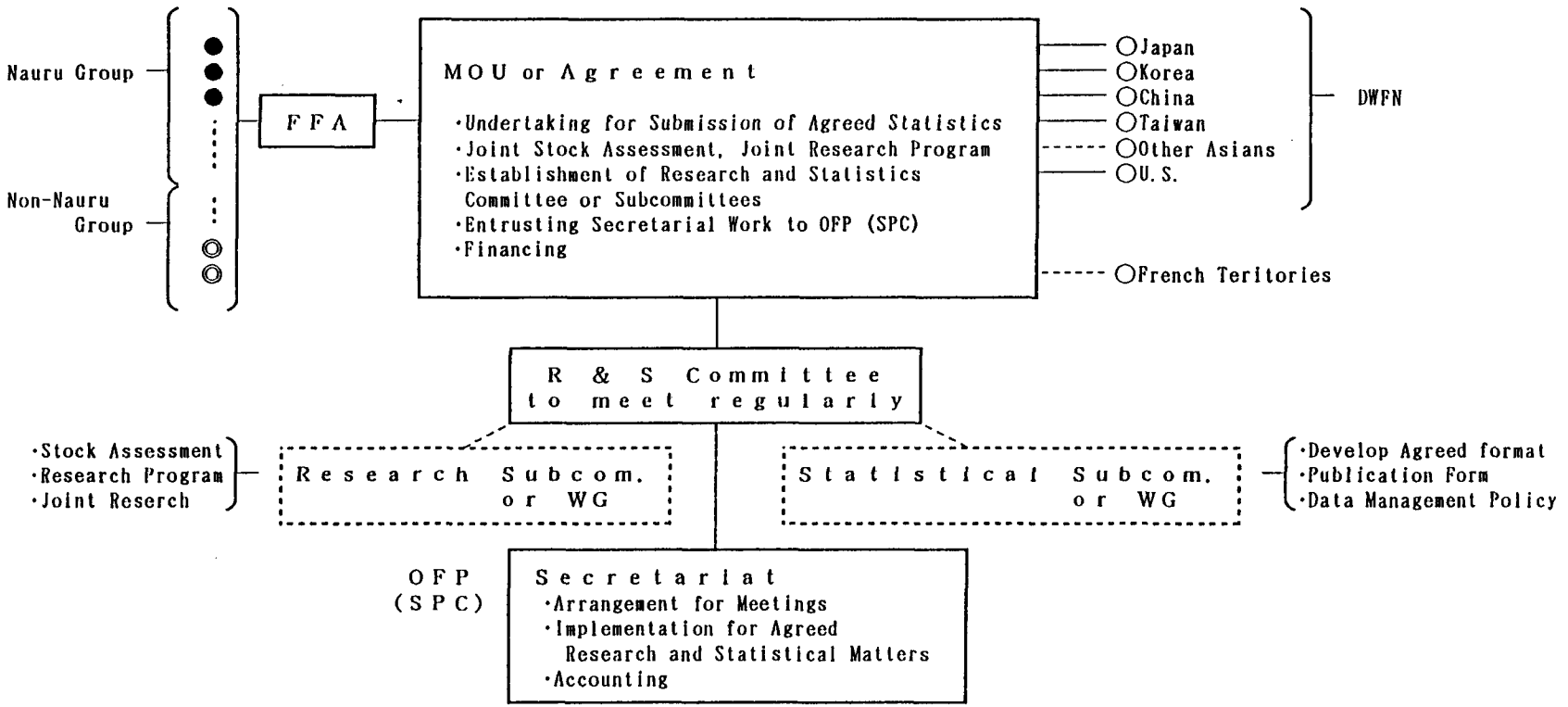
Option 2.

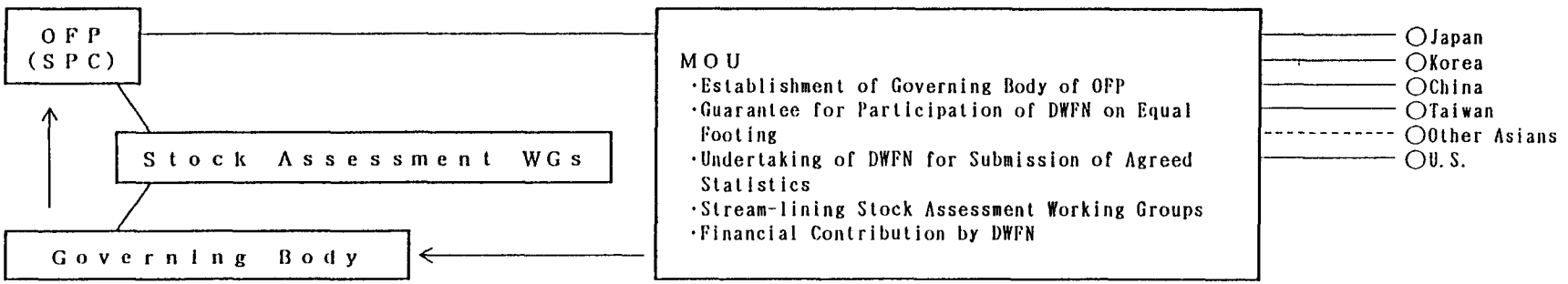


Participation : FFA (on behalf of 16 member states, or as an alternative Nauru group members) and all the nations and entities fishing in the region will sign and become parties to this arrangement.

Financing : The cost required for this arrangement which is above the regular budget of OFP (SPC) will be borne by participating nations and entities in proportion to their catch of tuna and tuna-like species in the region.

Secretariat : Alternative ② of Option 1. applys.

Option 3.



Participation : OFP (SPC) on one hand and all the DWFN in the region on the other, conclude MOU, in which OFP guarantee the participation on equal footing of DWFN in the governing body (if absent, establish) and DWFN undertakes to cooperate.

Financing : Additional cost above the present regular budget of OFP will be contributed by DWFNs in proportion to their respective catch. Although U.S. is a member of SPC, it is expected to make contribution as one of the DWFN, since regular contribution to SPC by its members does not take into account the catch of tuna to any extent.