Capacity Management in the Western and Central Pacific Ocean (1st Draft) (Agenda Item 11)

Peter M. Miyake (Japan Tuna)

Table of contents

Table of contents	
Summary	2
Introduction	3
1 Overview of fisheries in the Western and Central Pacific Ocea	n (WCPO) 3
1.1 WCPO area	3
1.2 Review of WCPO catches	4
1.3 Review of WCPO effort	
2 Past trials on capacity management in WCPO	7
3.1 Forum Fisheries Agency (FFA)	
3.2 Nauru Agreement Concerning Cooperation In 'The Mana	ngement Of Fisheries Of
Common Interest' (Nauru Agreement)	
3.3 The Palau Arrangement for the Management of the Wes	tern Pacific Purse Seine
Fishery	
3.4 The FSM Arrangement for Regional Fisheries Access	8
3.5 The Multilateral Treaty with United States	
3.6 Organization to Promote Responsible Tuna Fisheries (OPRI	r)9
3 WCPFC's policy	9
3.1 Creation of WCPFC (MHLC and PrepCon)	9
3.2 Special characteristics of WCPFC	10
3.3 Actions taken by WCPFC on fishing capacity/effort	12
a) WCPO bigeye and yellowfin tuna (Appendix 4-1)	12
b) South Pacific albacore (Appendix 4-2)	13
c) North Pacific albacore (Appendix 4-3)	
d) Reduction of overcapacity (Appendix 4-4)	13
4 Evaluation of current capacity in WCPO	14
4.1 Review of past studies	14
4.2 Purse seine	14
4.3 Large-sized longline	16
4.4 Other small scale fisheries	18
5 Management options and discussions	19
6. Reference	
APPENDIX 1 Final act of MHLC	
APPENDIX 2 Resolution by MHLC concerning PrepCon	28
APPENDIX 3 Nauru Agreement	
APPENDIX 4 Revised Palau Arrengement	35
APPENDIX 5 WCPFC management decisions	
A5-1. WCPO bigeye and yellowfin tuna	
A5.2 South Pacific Albacore	
A5.3 North Pacific albacore	
A5.4 Resolution on overcapacity	60

Summary

In this paper, fisheries (catch and effort), stock conditions in the WCPO are first reviewed. Most of the major stocks are not yet overfished but likely overfishing is occurring (particularly for bigeye and yellowfin). For almost all the species, no increase in fishing effort (or fishing mortality) is recommended by scientists.

The RFMO in the area, i.e. WCPFC is only started in 2004 but the island states have created FFA in 1979, and Palau arrangement was adopted in 1992 to limit the number of purse seiners licensed to fish in EEZs to 205. The arrangement has been revised recently to limit vessel-days instead of limiting number of vessels and will be implemented by December, 2—7. Other various efforts for fleet managements in the WCPO are also reviewed.

After a long discussion in MHLC, the Convention for WCPFC has been adopted and PrepCon started in 2000. These processes are reviewed and special characteristics of WCPFC, which became into effect in 2004, are reviewed. The Convention states that any conservation measures to be taken into the consideration of any previously agreed measures established in the area by sub-regional organizations.

Past studies on fishing capacity relative to the resources in the WCPO were reviewed. All he studies indicated that purse seine capacity is in excess of harvesting MSY, and still increasing, despite of existing Palau Arrangement. Large scale longline capacity is also in excess but is declining. Small coastal fisheries including small scale longline fleet has been increasing and giving a great impact on tropical tuna stocks. However, the evaluation would be very difficult and management is even more difficult as uncertainties in statistics are so great.

The WCPFC has adopted, at its meeting in 2005, various management measures. For bigeye and yellowfin tuna, effort limitation was adopted for purse seine fleet and catch limits were established for longline fleet. These different approach is further analyzed: a) longline active fleet statistics are very uncertain; b) longline is more selective in target species than purse seine; c) purse seine has to operate in EEZs while longline can operate in its own EEZ and highseas; d) longline fleet has very different strata within it and capacity control is very difficult unless applied by strata; and e) according to the Convention, any management measures should not be inconsistent with arrangements already in existence in the area.

The most difficult problem in WCPO would be the special characters of the Commission, particularly giving very specific right to island states and its EEZs. Establishing TAC or TAE, and its allocation would be particularly difficult, if the EEZ is considered separately from highseas.

Introduction

As most of the major tuna stock sizes, with an exception of skipjack, are close to a reference point (e.g. Average Maximum Sustainable yield or AMSY), or below the reference point. Recent assessments for many major stocks demonstrated the fishing mortality has been above the level which corresponds to the reference point. Therefore, even the stock is not overfished, overfishing is occurring. Many stocks are under the management measures including setting a TAC and for some others, capping or reduction of efforts are recommended.

The modern industrialized longliners and purse seiners are quite mobile and once it is regulated for one stock or in one area, it moves immediately to another stock or area. Besides, the fishing efficiency is constantly improving, due to technological improvements and expanding world market for tuna. Therefore, the management of fishing capacity has to be considered on world-wide basis.

Atlantic, east Pacific and Indian Ocean have been managed for some time by respective tuna Regional Fisheries Management Organizations (RFMOs). However, the Western and Central Pacific Ocean (WCPO) had not been covered by such a regional body, except some sub-regional organizations. Only in 2004, a new organization, Western and Central Pacific Fisheries Commission (WCPFC) started its activities. Therefore, up to now, much of the fishing capacity which was overflowed from other regions has moved into this area. For this reason, the proper management of fishing capacity is very important in this area and has to be made before it is getting too late.

1 Overview of fisheries in the Western and Central Pacific Ocean (WCPO)

1.1 WCPO area

There are some complications in the definition of WCPO. Fig.1. shows the Pacific map (Williams and Reid, 2006). It shows the WCPFC Convention area and the IATTC Convention area. There is an area where both Convention waters are overlapping in south Pacific. The data from this area are included both in the IATTC and WCPFC statistics.

WCPFC had a special relationship with SPC OFP as a scientific advisory body. SPC is maintaining the data base and offering stock assessments for the WCPFC for all the tunas in the region with exceptions of southern

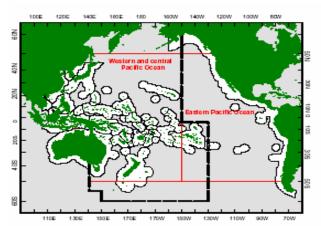


Fig. 1. Pacific by convention areas and indicating EEZ and Highseas.

bluefin tuna, northern bluefin tuna, northern albacore and northern billfishes (including swordfish). These northern stocks are under the mandate of Northern Committee established under the WCPFC. Southern bluefin is the mandate of CCSBT while the data for northern stocks of tunas and billfishes are collected and compiled by the ISC. WCPFC is in process of

exchanging MOU with those organizations (i.e. IATTC, SPC-OFP, CCSBT and ISC). Therefore, there is still no single data base for the entire WCPFC Convention area. More complication is that the data for northern albacore and bluefin are not separated for WCPFC area and IATTC

areas, though it is possible to split the current catch information. The reason is that only one stock for each species is recognized for north Pacific.

These complications in the area coverage and stocks may have some effects on possible management schemes planned for the WCPO. Fig. 1 also shows EEZ and Highseas. It is notable that most of the tropical area is mostly included in the EEZ and even Highseas in that area are mostly closed with EEZs all around. This may have an important effect in considering the capacity issue and particularly for its allocations.

1.2 Review of WCPO catches

Figure 2 shows landing by gears and Figure 3 shows landing by species, both in

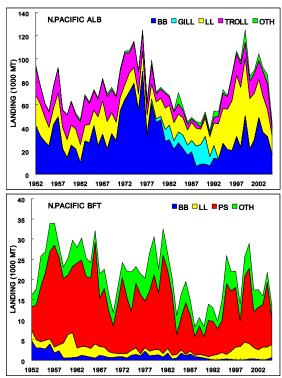


Fig. 4. Catch of N. Pacific albacore and bluefin tuna by gears.

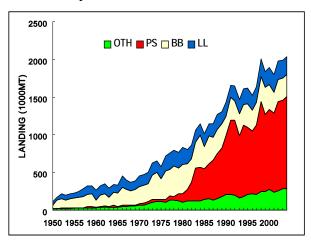


Fig. 2. Catch by gear for WCPO based on SPC data base

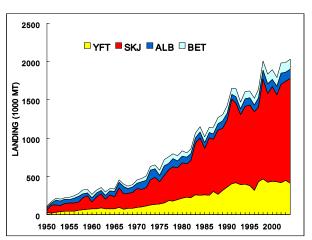


Fig. 3. Catch by species for WCPO based on SPC data base

WCPO. Both figures are based on the SPC-OFP data (as of June, 2006). These data do not include catches of north Pacific stocks and southern bluefin tuna. Landing by other gears in Fig. 2 is mostly attributed to the Philippines and Indonesian coastal fisheries. Since these figures are self-explanatory, no further interpretations are offered at this time.

Figure 4 shows landing of north Pacific albacore and bluefin tunas by gears. The data are taken from ISC (2006). The data for 2004 and 2005 are preliminary. Both species in the Fig. 4,

landings from the eastern Pacific (IATTC area) are included. For bluefin landing, data are available for east and west Pacific, separately. However, since there is only one stock in the north Pacific, in this figure, those were shown together. Again, the figures are self-explanatory.

Purse seine catch distribution of skipjack / yellowfin / bigeye is given in Fig. 5 (Williams and Reid, 2006). Almost all the catch is concentrated in the tropical waters, major catch being

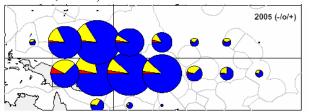


Fig. 5. Catch distribution of purse seine by species (blue-skj, yellow-yft and red-bet), 2005

Reid, 2006). It is clear that even for longline catch, the major fishing ground is between 20° N

and 20° S. Also the longline distribution suggests possible relationship between bigeye in the WCPO and those in the EPO. In this respect, single Pacific bigeye stock

assessment is being conducted.

Review of WCPO effort 1.3

Figure 7 shows purse seine effort (in days-fishing) distribution in 2005, by set types. Blue is for schooling fish while all the rest is on fish with floating objects in one way or another.

Figure 8 shows distribution of longline effort by fleets for 2000-2004. The domestic fleet effort excludes the Japanese coastal and the Vietnamese fisherv fishery: distant-water effort for Taiwan Province of China (TPC) and other fleets targeting albacore in the North Pacific are poorly covered. Both figs. 7 and 8 are taken from Williams and Reid, 2006. It should be noted that the longline categorized in the figure do skipjack and secondly yellowfin. The purse seiners catching bluefin (Fig. 4) are mostly coastal small sized vessels while those for the tropical tunas are large industrialized seiners.

Figure 6 shows the distribution of longline catches from the SPC data base (and

ISC for northern albacore; (Williams and

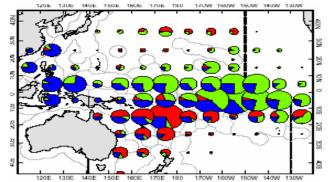


Fig. 6. Catch distribution of longline by species (blue-yft, green-bet and red-alb.), 2004

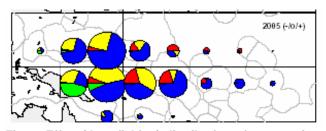


Fig. 7. Effort (days-fishing) distribution of purse seine by set type (blue-schooling, green-anchored FAD, yellow-log and red-floating FAD), 2005

not reflect the size of the vessels. Many domestic longliners are actually large-scale industrialized longliners operating from the island states, by chartered or joint venture arrangements. However, majority of longliners in the Philippine waters are small-scale vessels.

Historical tendencies of effort, both for purse seine and longline fleets are discussed further in Chapter 5.

Review of current stock status

The followings are very short abstracts of the latest advices given by the Scientific Committee of WCPFC (Aug. 2006) about major stocks in the Convention area.

Bigeye

Current biomass is above MSY due to the recent high recruitment, but F is higher than that corresponding to MSY. In order to maintain the bigeye stock at a level capable of producing the maximum sustainable yield the Scientific Committee recommended a 25% reduction in fishing mortality from the average levels for 2001-2004.

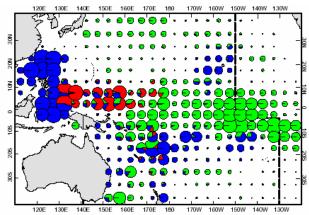


Fig. 8. Effort distribution of longline, green-distant water, red- foreign offshore and blue-domestic.

Yellowfin

Current biomass is above MSY but with 75% probability, F is over the F_{MSY} . In order to maintain the yellowfin stock at a level capable of producing the maximum sustainable yield the Scientific Committee recommended a 10% reduction in fishing mortality from the average levels for 2001-2004. There is a possibility that a intensive local overfishing is occurring in the western tropical area and shift in stock distribution may occur.

Skipjack

Catches increased in 2005 from their previous historical high in 2004. These high catches are sustainable unless recruitment falls persistently below the long-term average. However, any increases in purse-seine catches of skipjack may result in a corresponding increase in fishing mortality for yellowfin and bigeye tunas.

South albacore

Current catch levels from the South Pacific albacore stock appear to be sustainable and yield analyses suggest that increases in fishing mortality and yields are possible. However, increased effort will not result in an equivalent increase in catch.

For the northern stocks, ISC, 2006 recommended as follows;

North albacore

It was noted that the key conclusions for North Pacific albacore is that the stock is considered to be fully exploited. The management measures introduced by both WCPFC and IATTC are consistent with the ISC recommendations. IATTC recommendation is that "The total level of fishing effort for North Pacific albacore tuna in the Eastern Pacific Ocean not be increased beyond current levels".

Pacific bluefin

For Pacific bluefin tuna, recent recruitment is estimated to have been at a high level. However, there is a high level of uncertainty in the estimates, so ISC recommended that there be no increase

in fishing mortality.

2 Past trials on capacity management in WCPO

3.1 Forum Fisheries Agency (FFA)

The Pacific Islands Forum Fisheries Agency (FFA) is based in Honiara, Solomon Islands and comprises 17 member governments. It was established in August 1979 to help countries manage their fishery resources that fall within their 200 mile exclusive economic zones. The founding document of the Agency is the South Pacific Forum Fisheries Agency Convention. FFA's objective is that Pacific tuna resources could be permanently managed for the sustained economic benefit of its members (from home page of FFA).

FFA stays as an independent organization even after the WCPFC became in effect but is collaborating with the latter. FFA administers the foreign fleets which were given fishing license to access the EEZs of the member states. Therefore it is the administration agent for the Palau Arrangement. On the other hand, its mandate is limited to the EEZs. The VMS is a part of the program which FFA is trying to use for fleet managements.

The Palau Arrangement is integrated part of FFA's effort to manage fishing capacity; it is discussed independently in the Section 3.3.

3.2 Nauru Agreement Concerning Cooperation In 'The Management Of Fisheries Of Common Interest' (Nauru Agreement)

The Nauru Agreement entered into force on December 4, 1982. Its principal objectives are to coordinate and harmonize the management of fisheries with regard to common stocks within the Fisheries Zones of the contracting Parties, for the benefit of their people. To this end, the parties undertake to establish a coordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels, and in particular: (a) to establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels; (b) to establish, as a minimum, uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones; and (c) to establish other uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones. [Articles I and II]. The FFA provides considerable advisory, administrative and secretariat support. The whole text is attached as Appendix 3.

3.3 The Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery

FFA member countries, being concerned about the rapid expansion of the purse seine fishery in the Western Pacific in the late 1980s and early 1990s, adopted an agreement with the signing of the "Arrangement for the Management of the Western Pacific Purse Seine Fishery" (known as the Palau Arrangement) in October 1992, by the Parties to Nauru agreement (PNA) i.e.

Federated States of Micronesia (FSM), Marshall Islands, Nauru, Palau, Papua New Guinea and Tuvalu. Solomon Islands and Kiribati signed in 1993 and the arrangement remains open for signature by the remaining FFA countries.

The intention of the Arrangement was to set an agreed cap on the level of effort by large-scale tuna purse seine vessels for their EEZs. The Arrangement sets a limit of 205 purse seine vessels that may be licensed to operate in their EEZs. The priority of giving licenses is as follows: 1) domestic vessels; 2) domestic vessels of another Party to the Arrangement; 3) locally-based foreign fishing vessels, including joint ventured; 4) foreign fishing vessels with established access agreements; and 5) new entrants into the fishery

Consistent with their desire of developing the locally-based fleet, in 1994 the FFA countries involved agreed to a 10% cut in the number of purse seine licenses allocated to bilaterally-licensed fleets. This cut will become effective in three years time, removing 12 foreign boats from the fishery. Associated with this reduction, the FFA countries agreed that 12 new licenses are to be added to the "domestic/locally-based foreign/FFA member bilateral" category. There are no regionally agreed management measures at present for the longline fishery.

Although the limit was only for EEZ, it did affect to the fishing effort operating near by highseas, as over 80% of the purse seine catches in that region came from their EEZs.

In December 2000, the Palau Arrangement Parties signaled their intent to move to a new scheme. This was intended to replace the limits on "vessel numbers by fleet". in the Arrangement, by a scheme based upon limits on "vessel days by zone (EEZ)". Under this scheme the parties will determine the total allowable effort (TAE) on an annual basis. This TAE will then be allocated amongst the Parties to the Palau Arrangement. The establishment of a TAE was based initially on an average effort for the period 1999-2001, then subsequently for 2000-2002. Overall, this was designed to limit fishing effort to a lower level than currently occurring, consistent with a precautionary approach. In addition, it took account of SCG recommendations to cap fishing mortality on bigeye and yellowfin tuna. The whole revised Agreement is attached as Appendix 4

The vessel day scheme (VDS) is to be implemented progressively until full implementation by 1 December 2007. Until that time, the vessel limits under the Palau Arrangement will also remain in place. The FFA intends to administer this system. However, it is recognized that the calculations of vessels days by zone is very complicated issue as one vessel can move more than one EEZ and highseas. There will be some more difficulties in establishing annual TAE and more so in allocating them into each EEZ. This will be discussed in Chapter 5.

3.4 The FSM Arrangement for Regional Fisheries Access

The purpose of the Federal State of Micronesia (FSM) Arrangement is to promote the development of a domestic purse seine fishery in the PNA sub-region by allowing eligible vessels to secure preferential access to more than one PNA EEZ. Eligible vessels are defined as those that have met certain criteria as to domestication, e.g. level of investment, crewing, landing

etc. The Arrangement is centrally administered through FFA.

3.5 The Multilateral Treaty with United States

When US seiners left EPO for various reasons (particularly to avoid criticism on dolphin mortality), most of them moved into the WCPO. As the coastal states acquired more right oriented measurements based on UN Law of the Sea, under the negotiation, US decided to have an access arrangement collectively with island states in the area. Under the multilateral treaty with the United States (1988), FFA members have agreed to give regional access to up to 50 U.S. purse seine vessels subject to terms and conditions specified in the treaty (recently renewed up to 2010). In fact, owing to a variety of factors, the effort allocation under the treaty is not fully utilized by the U.S. at present. One of the difficulties for the Parties to the Palau Arrangement has been how to reconcile their obligations under the U.S. Treaty with the decline in the overall size of the U.S. fleet. Similar difficulties may well confront WCPFC, when and if WCPRC adopted any effort management scheme. It would be particularly complicated as the WCPFC area includes highseas while this Treaty is for EEZs.

3.6 Organization to Promote Responsible Tuna Fisheries (OPRT)

Effort to control any longline fishing capacity in the WCPO was initiated by the Japanese Government. In early 1990s, as the international management measures developed, IUU longline fleet expanded (the estimates go up to 340 longliners). To combat this fleet, the Japanese Government started a buy-back policy of longliners built in Japan (many of which had already been exported to Taiwan). At the same time, Japanese tuna industry organized OPRT and invited all the major longline tuna fishing countries and entities to join. (Miyake, 2005).

The objective was to call back all the flag of convenience longliners, most of which were IUU vessels, to the country of owners. At the same time, Japan provided funding to scrap the vessels originally built in Japan. As the effort of OPRT, and various actions taken by RFMOs and governments (including trade measures), the number of IUU longliners have been reduced (now estimated as 30). Also as many longliners have been scrapped, the longline fishing capacity has been well declining. These efforts of capacity management are on global bases and not specific to the WCPO, as the vessels are mobile between oceans and most of the time have fishing license for more than one area. More details will be covered by a paper also presented to this meeting by OPRT.

3 WCPFC's policy

3.1 Creation of WCPFC (MHLC and PrepCon)

In December, 1994, the first session of Multilateral High-Level Conference on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific (MHLC) was held. The meeting was called by FFA to follow the entry into force, on 16 November 1994, of the 1982 United Nations Convention on the Law of the Sea, The second meeting was held in June 1997, to consider highly migratory fish stocks in accordance with UNIA. The series of conferences were, in a sense, looking after the particular interest of island

states, in its nature being organized by FFA. For this reason, there was a long process of discussion between island countries and those of the long distant fishing nations.

In September 2000, final "Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean" was agreed upon and the Final Act of the conference was adopted (see Appendix 1). At the same time it adopted a Resolution (Appendix 2) to establish "Preparatory Conference of the Establishment of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean" (PrepCon). Some of the long distant fishing nations had some difficulty in accepting the draft and requested further modifications on the Convention Draft. Those problems were left for the work of PrepCon.

The objectives of the PrepCon were to build a frame work of the expected Commission and its subsidiary bodies and not to produce the vacuum between the end of HLMC and start of the new Commission. Those work included drafting Rules of Procedures and financial rules, as well as establishing statistical requirements, data base and monitoring and compliance schemes. PrepCon even started scientific work, made stock evaluation and produced recommendations on conservation and management measures. Among these works, those specific to the fishing capacity are listed below.

At the PrepCon III, Nov. 2002, Japan participated PrepCon for the first time and introduced a draft resolution relating to IUU fishing and limits on fishing capacity. The resolution urges all States and other entities to exercise reasonable restraint in respect of any expansion of fishing effort and capacity in the Convention Area, in accordance with their international obligations and with the FAO International Plan of Action on IUU and fishing capacity. It was adopted by consensus (WCPFC/PrepCon/22).

At PrepCon V, Sept. 2003, after a considerable discussion, a resolution was adopted. The Resolution, *inter alia*, requested the interim secretariat to prepare a paper on management options in respect of yellowfin and bigeye stocks and in the meantime urged all participants to fully implement previous resolutions of MHLC and the Preparatory Conference calling for the exercise of reasonable restraint in respect of any expansion of fishing effort and capacity in the Convention Area.

During PrepCon VI, April, 2004, Working Group III identified that the Commission's record of fishing vessels and fishing authorization and the scheme for vessel and gear marking as the most urgent matters for discussion. WG.III was able to produce a first draft of the Commission's record of vessel and fishing authorizations on the basis of proposals that had been submitted by the European Community, Japan and the FFA.

The Convention entered into force on June 19, 2004. Its last meeting (PrepCon VII) took place immediately before the inauguration of the new Commission, held in December, 2004.

3.2 Special characteristics of WCPFC

Article 10 of the Convention states that;

- 1. Without prejudice to the sovereign rights of coastal States for the purpose of exploring and exploiting, conserving and managing highly migratory fish stocks within areas under national jurisdiction, the functions of the Commission shall be to:
- (a) determine the total allowable catch or total level of fishing effort within the Convention Area for such highly migratory fish stocks as the Commission may decide and adopt such other conservation and management measures and recommendations as may be necessary to ensure the long-term sustainability of such stocks;
- (b) promote cooperation and coordination between members of the Commission to ensure that conservation and management measures for highly migratory fish stocks in areas under national jurisdiction and measures for the same stocks on the high seas are compatible;

Article 8 (2) states that

Compatibility of conservation and management measures

- 2. In establishing compatible conservation and management measures for highly migratory fish stocks in the Convention Area, the Commission shall:
- (a) take into account the biological unity and other biological characteristics of the stocks and the relationships between the distribution of the stocks, the fisheries and the geographical particularities of the region concerned, including the extent to which the stocks occur and are fished in areas under national jurisdiction;

(b) take into account:

- (i) the conservation and management measures adopted and applied in accordance with article 61 of the 1982 Convention in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the Convention Area as a whole do not undermine the effectiveness of such measures;
- (ii) previously agreed measures established and applied in respect of the same stocks for the high seas which form part of the Convention Area by relevant coastal States and States fishing on the high seas in accordance with the 1982 Convention and the Agreement;
- (c) take into account previously agreed measures established and applied in accordance with the 1982 Convention and the Agreement in respect of the same stocks by a subregional or regional fisheries management organization or arrangement;

Particular attention should be given to the Article 8(2) (b) and (c). These articles imply that any management measures must respect pre-existing sub-regional arrangements (e.g. FFA). Therefore, when WCPFC considers any effort or capacity managements, now and future, those agreements that had made by various forms discussed above in Chapter 3 must be well respected.

WCPFC has 28 Members and 2 Cooperating non-Members. Most of then are coastal States and some are coastal and distant water states. Of these 30, 17 are members of FFA and 8 are further signatories of the Nauru Agreement. On the other hand, near 80% of large purse seine

effort takes place in the EEZ of the 8 Nauru Agreement coastal States, which have been the signatories of Palau Arrangements and thus agreed on capacity limitation and complicated access rules. As explained in Section 3.3, the capacity limitation is now shifting from number of vessels towards the management of Vessel Days

Another complication is that the Convention area of WCPFC overlaps with those of CCSBT and IATTC. In the case of CCSBT, the same situation occurs with IOTC and ICCAT. The mandate of CCSBT is limited to the southern bluefin tuna and hence by the arrangement through the exchange of MOU, that particular species is left for CCSBT. However, the convention area overlaps in the South Pacific between 130° and 150° W. with that of the IATTC. This gives some difficulties in compilation and reporting of statistics, assessments and managements.

The other complication is that there are more than one fishery management organizations in the Pacific Ocean. In the Indian and Atlantic Oceans, only one tuna RFMO exist, respectively, with an exception of CCSBT mentioned above. This means any single stock in an ocean can be managed by one management body. In the Pacific Ocean, WCPFC alone can not manage some of the tuna stocks (e.g. north and south albacore, Pacific bluefin tuna, swordfish and some billfishes). In the north Pacific, particularly ISC covers trans-Pacific stocks (e.g. north albacore and bluefin tuna) and hence WCPFC, IATTC and ISC are all involved in the assessments and possibly on managements. This may affect in the capacity management of the tuna fleet on the Pacific basis.

3.3 Actions taken by WCPFC on fishing capacity/effort

Any conservation measures valid at this time of writing this report are those all adopted by the Commission at its 2005 meeting (Western and Central Pacific Fisheries Commission, 2005). Among the Commission decision, the followings are related to fishing capacity and/or fishing effort in the WCPO.

a) WCPO bigeye and yellowfin tuna (Appendix 4-1)

Conservation and Management Measures (CMM) 2005-01 requested that the total level of fishing effort for bigeye and yellowfin tuna in the Convention Area shall not be increased beyond current levels (i.e. including fishing rights authorized currently with any other arrangements in the area). It seems that this rule applies to all the fleets and for EEZ as well as highseas, although any existing measures by sub-regional or bilateral agreements are only on EEZ and for purse seine.

For purse seine, it applies in the area between 20^oN and 20^oS and CCP, according to the Article 10, shall take measures to ensure that the effort level should not exceed either 2004 or average of 2001 to 2004 in EEZs. According to the Article 8, the Commission shall ensure that purse seine effort levels do not exceed 2004 levels on the highseas or the total fishing capacity in the Convention Area. The Executive Director with consultation with SC shall submit in 2006 a proposal for consideration of a temporary purse seine closure, consistent with the IATTC arrangements. Also SC and TCC will consider mitigation of juvenile bigeye and yellowfin taken around FADs.

For longline fishery, CCM for the next 3 years shall not exceed the average annual bigeye catch for the years 2001-2004 or 2004 (CCM with a catch less than 2000 mt are exempted as far as the catch is less than 2000mt).

These recommendations are all binding, but to some extent obscure. 'Fishing capacity', 'number of fishing vessels' and 'fishing efforts' are not well defined and it appears if they are used synonymously. Besides CCMs' obligation to take these measures are specified to apply only to their own EEZs. High seas measures are left for the Commission and that leaves a doubt of what is the obligations of the CCMs relating to the highseas. As a general rule, the effort limit is applicable for all the fleets but in particular, it is for purse seine, while catch limits were adopted for the longline fleets and the area (EEZ vs. highseas) is not specified in this case.

Together with the basic rule of the Commission, i.e. any measures should be consistent with the current measures taken by sub-regional arrangements, possibly this new decision might not change the current agreed scheme on limitation of fishing effort made by FFA and others.

b) South Pacific albacore (Appendix 4-2)

CMM 2005-02 decided that CCM shall not increase the number of their fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 200S above current (2005) levels or recent historical (2000-2004) levels.

This is a binding recommendation. Interesting point is that unlike the case of bigeye and yellowfin, the limit is specified as number of fishing vessels and no distinction of the area between EEZs and highseas. Besides, most of the albacore fishery is by longline, for which catch limit was adopted for bigeye and yellowfin.

c) North Pacific albacore (Appendix 4-3)

CMM 2005-03 requires that the CCMs shall take necessary measures to ensure that the level of fishing effort by their vessels fishing for North Pacific albacore in the WCPF Convention Area (north of equator) is not increased beyond current levels.

This recommendation is also binding. For this stock, it also specifies fishing effort to be limited. Definition of effort is not very well defined again.

d) Reduction of overcapacity (Appendix 4-4)

Resolution 2005-02, which is not binding, requested CCMs whose nationals are beneficial owners of purse seine vessels that entered the WCPFC Convention Area after the MHLC and PrepCon resolutions and other concerned CCMs shall work together to ensure that the beneficial owners reduce by 31 December 2007, such overcapacity as created by those fishing vessels through reduction of equivalent fishing capacity of other fishing vessels operating in the Convention Area.

In essence, any fishing capacity which recently added to the Convention Area should be removed or reduced to that extent. Again, the capacity is not defined and hence most likely be interpreted as number of fishing vessels.

4 Evaluation of current capacity in WCPO

4.1 Review of past studies

The controlling fishing capacity has been discussed for some time by now. The FAO, intending to develop International Plan of Action (IPOA) for the management of fishing capacity, held its first Working Group in 1997 in La Jolla, California. In this Group, term of the fishing capacity was defined and various elements affecting the fishing capacity were identified. Also the discussion was much focused on the illegal, unregulated and unreported (IUU) fleet activities.

The report from the Working Group was further reviewed by the Inter-governmental Consultation of FAO in 1998 and finalized as IPOA on Fishing Capacity. It was approved in 1999 and all the countries were requested to voluntarily develop NPOA by 2004 and Regional Plan of Action by 2005. Noting that the progress of CCPs in developing such NPOA was slow, FAO dispatched Technical Advisory Committee of the FAO Project on 'Management of tuna fishing capacity; conservation and socio-economics' to cover all the aspects, utilizing the Japanese Trust fund.

The Technical Advisory Committee met three times in past. The 2nd meeting held at Madrid, in 2004 was the major concluding meeting where many working papers were presented (Bayliff *et al.* Ed. 2005). Those are the base of the current knowledge. In 2005, the COFI of FAO decided to hold inter-RFMOs workshop in 2007 to discuss harmonization of various policies among the regions, including the fishing capacity management. Since it is a very important issue, FAO decided to hold the third workshop of the Technical Advisory Committee in La Jolla, CA, in May, 2006. Some follow-up papers were submitted to this session to up-date the current status.

4.2 Purse seine

2nd Meeting of the Technical Advisory Committee of the FAO Project on Management of tuna fishing capacity; conservation and socio-economics cover all the aspects. The report of this meeting Bayliff *et al.* Ed, 2005) summarized the results of the group's study, concerning purse seine fishing capacity as follows:

"The analysis conducted for the WCPO suggests that excess fishing capacity exists for all of the major fleets, i.e. those of Japan, the Republic of Korea, the Philippines, Papua New Guinea, Taiwan Province of China and the United States, and for the other fleets combined.

"It is estimated that, on average, during 1998-2002 purse-seine skipjack fishing capacity was around 306 000 tonnes (35 percent) per annum greater than the actual catches (only 137 000 tonnes or 16 percent greater after purging for technical efficiency). Estimated excess fishing capacity, purged for technical efficiency, was at its highest level in 2000. It was hypothesized that this may have been caused by low skipjack prices during the second half of 1999 and throughout 2000, resulting in vessels reducing the number of days spent searching and fishing.

"For yellowfin and bigeye combined it was estimated that during 1998-2002 excess

purse-seine fishing capacity was around 72 000 tonnes (29 percent) per annum greater than the actual catch (only 12 percent or 31 000 tonnes after purging for technical efficiency). It was also estimated that during 1998-2002, on average, fishing capacity purged for technical efficiency for yellowfin and bigeye combined was in excess of the average catches between 2000-2002 by 47,666 tonnes or 20 percent, but that no excess capacity existed in the fishery in 2002 when measured against average 2000-2002 catch levels."

These are mostly based on the DEA estimates made by Reid *et al.*, 2005. The reoirt used DEA in combination with SPC statistics and their studies showed for yellowfin and bigeye combined it was estimated that during 1998-2002 excess purse-seine fishing capacity was around 50 000 tonnes (28 percent) per annum greater than the actual catches. However, it noted that when purging for TE (technical efficiency) excess yellowfin and bigeye fishing capacity was only 19 000 tonnes (11 percent) per annum greater than the actual catches. In other words, only around 40 percent of the potential increase in catches could be realised through increases in variable input usage, given the biomass, environmental conditions and the state of technology that prevailed over this period.

It was also estimated that on average during 1998-2002 fishing capacity, purged for TE, for yellowfin and bigeye combined was in excess of the average catches between 2000-2002 by 47 666 tonnes or 24 percent, but that no excess capacity existed in the fishery in 2002, when measured against average 2000-2002 catch levels. This report also estimated the excess of the purse seine fishing capacity is much more serious in the Indian Ocean than in WCPO. As the world based as well as in the WCPO, the excess capacity seems to be highest in 1999 and there after, they have declined to some extent, while still is in excess of the yield. They also concluded if the TE (technical level of skippers) are not considered in the efficiency, the excess would be less than in the case those are included.

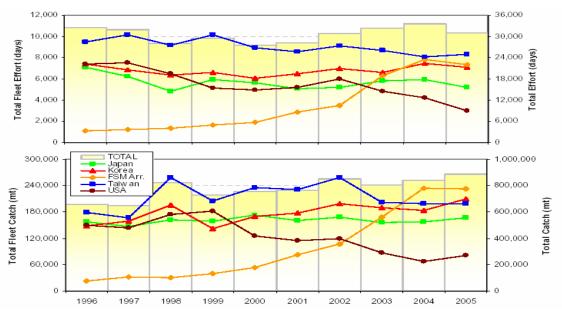


Fig. 9. Trends in annual effort (top) and catch (bottom) estimates for the top five purse seine fleets operating in the tropical WCPO, 1996–2005. (P. Williams and C. Raid, 2006)

Estimation of purse seine fishing capacity, number of vessels, and/or fishing days in the WCPO is difficult even for current years and more so for past years. Figure 9 indicated recent catch and effort of the five major fleets operating in the tropical area of the CWPO (Williams and Raid, 2006). Both catch and effort were on increasing trends. Figure 10 is taken from J. Hampton (2006) and gives estimates for number of vessels and fishing days (including searching days). Leiva Moreno and Majkowski, 2006 estimated the number of purse seine vessels in the area as 201 and its carrying capacity as 215,835 tonnes which correspond to 38.7% in number and 41% in carrying capacity of the world total purse seine fleet.

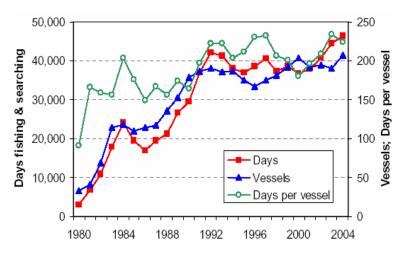


Fig. 10. Time series of annual purse seine effort (days fished and searched), annual vessel numbers (Lawson 2005) and average days per vessel. (J. Hampton, 2006)

Those data are relatively consistent and show general increase in effort or number of vessels until 1992. Thereafter, with a little slack, resumed increase since late 1990s. However, the number of purse seiners fishing in that area did reached at the 205 limit set by the Palau Arrangement in recent years, while effort in number of days keep increasing. interesting how these values would react when vessel-day scheme is fully implemented, replacing the current number of vessels limitation.

4.3 Large-sized longline

Longline vessel number is more difficult to estimate than that of the purse seiners. The reasons are related to the nature of longline operations and discussed in Chapter 5.

Fig. 11 shows estimated number of longliners operating in the tropical area of WCPO, by status of the registration and license arrangements (Williamas and Raid, 2006). Obviously the figure includes many near-shore middle size and coastal artisanal longliners but not

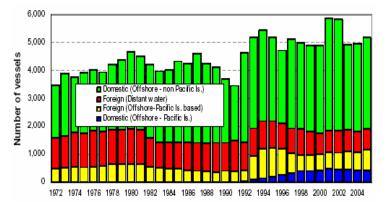


Fig. 11. Longline vessels operating in the tropical area of WCPO (Williams and Raid, 2006)

large longliners fishing in south or north Pacific. Therefore it should be well borne in mind that the figure does not reflect entire longline fleet size for the WCPO.

Domestic fleet sizes continue to increase at the expense of foreign-offshore and

distant-water fleets with the exception of TPC, distant-water longline fleet which increased by ~80% over the period 2000–2003 (from 78 in 2000 to 142 vessels in 2003, but has been stabilized at 133 vessels in 2005). This results are bit contradictory with the studies by Miyake, 2006, which indicated that the activities of large longliners has been declining in the Pacific. Most likely the figure cited above is referring to those fishing in the tropical area of WCPO and thus the area, time and fleet strata might be different between two studies.

Figure 12 shows estimated catch of major species of tuna in the Pacific Ocean by small and large scale longliners (Miyake, 2006). Data for 2005 is incomplete. The figure does not separate EPO from WCPO but is indicative of the increased portion of catches by small longliners.

Gillette (2005) and Hampton (2006) classified them into large and middle sized longliners and described the area and target species of various fleets. Table 1 is the estimates made by Hampton (2006). It is not clear if those are the number of longliners registered or active. Also the longliners fishing in the North Pacific Japanese or TPC EEZ and only in the highseas may not be included. Small longliners fishing in the Philippines and Indonesian waters seems not covered in this Table.

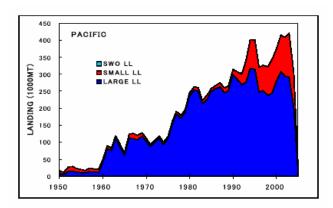


Fig. 12. Catch by large and small longliner in the Pacific Ocean. (Miyake, 2006)

Table 1. Number of longliners estimated for WCPO (J. Hampton, 2006)

Fleet	Equatorial	North Pacific	South Pacific	Total
Large-scale		788		788
Offshore	2,209	1,091	647	3,947

just number of vessels actively fishing in the WCPO. Besides, the studies must be classified by the type of operation and target species. At any rate, Miyake (2006) concluded that the number of large longliners operating has been declining on all over the world bases, mostly due to the economical reasons.

Williams and Raid (2006) stated that a significant change occurred in tropical WCPO longline fishery over the past 5 years. Pacific-Islands domestic albacore Miyake (2005) estimated 1014 large longliners are licensed to fish in the Pacific Ocean while 458 middle sized longliners in the Pacific (including Eastern Pacific Ocean). Much more in depth studies are needed to estimates longline fishing capacity or even

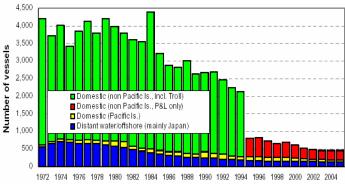


Fig. 13. Pole and line vessels operating in the tropical area of WCPO (Williams and Raid, 2006)

fisheries grow (from taking 32% in 1998 to over 53% of the longline catch in the south Pacific in 2005. TPC distant-water longline fleet changed the effort to targeting bigeye in the eastern equatorial waters resulted in a reduced contribution to albacore catch and increased significantly bigeye catches (2000nt in 1990s to 16,888 mt in 2004).

4.4 Other small scale fisheries

Table 2 is from Gillett (2005), showing tuna catches by small scale fisheries in various areas. Oceania and East and Southeast Asia correspond to WCPO (possibly including some Indian Ocean catches). Sum of the two areas is approximately 200,000 mt. The figure seems not including those of the near shore longliners from TPC and Japan, and hence this table may be incomplete. Miyake (2006) estimated the small longline catches of the major species of tuna as 150,000 mt per year.

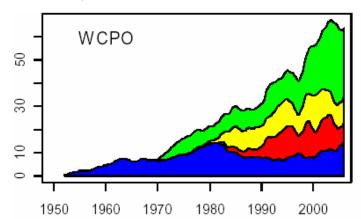


Fig. 14. Impacts on spawning yellowfin biomass in WCPO of various fisheries (Green Philippines and Indonesian coastal fisheries, yellow PS with associated objects, red PS schooling, blue longline) from J. Hampton *et al.* (2006)

Table 2
Regional summaries of tuna catches by small-scale fisheries

	Small-scale catches (tonnes)	Total catches (tonnes)	Small-scale catches as percentages of totals	Sources of regional total catch estimates
Oceania	19 000	900 000	2.1	SPC Tuna Fishery Yearbook information covering SPC fisheries statistical area, less any included Indonesia and Philippines catches.
Eastern Pacific	40 500	750 000	5.4	J. Joseph (per. com. using FAO and IATTC data).
Western Atlantic	11 000	112 000	9.8	ICCAT database.
Eastern Atlantic	11 000	347 600	3.2	ICCAT database.
Mediterranean	1 700	28 500	6.0	ICCAT database.
Indian Ocean	52 000	880 000	5.9	IOTC database.
East and Southeast Asia (Pacific Ocean)	185 000	928 000	19.9	FAO database (NW Pacific); Appendixes 8 and 9 of his report.
Total	320 200	3 946 100	8.1	

Figure 13 gives total number of pole-and-line vessels operating in the tropical area of WCPO (Williams and Raid, 2006). The vessels are classified by type of base and licensing arrangements. Most likely the figure does not include the Japanese pole-and-line vessels fishing in its EEZ and highseas in the North Pacific and hence not reflecting the total fleet size. However it is obvious that the number of non-island pole-and-line vessels is reducing significantly in the tropical waters.

Figure 14 shows the impact of catch by various fisheries on yellowfin spawning stock. Over 40% of the impact comes from the Philippines and Indonesian coastal fisheries. The

Second Scientific Committee of WCPFC (Aug. 2006) concluded that the local over-exploitation is very much occurring in the western tropical waters and that might change the shift in the distribution of this stock in future. However that is the area where most of the uncertainty is found in statistics. Increasing impact shown in the figure may be reflecting the improvement of statistics and thus further possibly increase in near future, as more improvement of statistics are realized. In case of bigeye, the impact by this fishery is a little less while that of longline is substantially larger.

5 Management options and discussions

Since the fishing capacity management options were extensively discussed from various aspects, at the 2nd and 3rd sessions of the FAO Technical Advisory Committee, and by the contribution papers submitted to these sessions, particularly by Joseph (2005), there is very little to be added. The most complications in applying an option come from the fact that fisheries are multi-specific, and there are gear interactions over species. Those are also reviewed by all the papers shown in the references. One important issue is the feasibility of management of stocks through management of effort, fishing mortality, fishing capacity. This is also reviewed in those papers and particularly specific for the WCPO by Hampton, 2006. Therefore, only very specific problems related to the WCPO will be pointed out in this chapter.

It is interesting to note that WCPFC took the first stock management decision in 2005 for yellowfin and bigeye (see Appendix 5-01 and Section 3.3.a) by agreeing catch restriction for longline and effort restriction for purse seine fisheries. The reasoning behind is that the purse seine is less selective in species and size of fish, and difficult to apply catch limit by species. However, the major reasons are related to characteristics of WCPFC Convention. Those include the followings;

- a) Many longliners in the WCPO boat list are only those licensed to fish in that area. They are not necessarily active in the WCPO. Many longliners are licensed by flag states to fish in more than one area or ocean and they do operate in different oceans. Therefore, license numbers do not reflect the real numbers of vessels (Miyake, 2005). The control of active fishing vessels therefore may be difficult for the administrative reasons.
- b) Purse seiners fish in the tropical water for skipjack, yellowfin and as by-catch bigeye. Longliners are more stratified by their target fish such as bigeye, bluefin, yellowfin, albacore and swordfish. This does not mean that they catch only one species but other species are also captured in important proportion. However, the area and time of operations are different according to the target species and thus the fishing capacity may be estimated by strata and administered independently, to some extent. For example, effort for North Pacific bluefin is identifiable by the area and time, and effort for bigeye and swordfish can be also identifiable by the depth of the hooks being set.
- c) The purse seiners can not economically operate in the WCPO without fishing in someone's EEZ but some longline vessels can fish only in the highseas and their own EEZ. This means that FFA fish registry would be complete for purse seine but not for longline vessels.

- d) Size and facilities of longline vessels vary much more than purse seiners. Longline category includes from very small artisanal longliners without any cover to modern large longliners with super freezer. This makes it very difficult to estimate overall fishing capacity. Management of the capacity, therefore, would be difficult, unless applied for each stratum, separately, and good fleet statistics (and attributes) are very difficult to obtain for capacity analysis. In this respect, the management of large-sized longline fleet has been much advanced and effectively affecting on the fleet size.
- e) The WCPFC Convention requests to respect the existing arrangement for the management by CCPs and/or Sub-Regional bodies. The existing management measures are all centered to number of licenses to be allowed to fish in the EEZ of PNA (Palau Arrangements). Therefore any management measures should not be inconsistent with these arrangements.

It is interesting to study if putting catch quota (or setting TAC) for the purse seine fishery would be inconsistent for current management arrangements. Hampton (2006) discussed the effort control as a method of controlling catch, while species interaction has to be taken into consideration. On the other hand, the capping the number of purse seiners licensed to fish in EEZs is not really capacity management, as capacity of each vessel is not considered, and highseas is excluded. Considering the capacity management in the CWPO, it is very difficult to apply different rules for EEZs and highseas. Even in the management recommendations by WCPFC in 2005 (Appendix 5-01), which is binding, effort limitation for CCP is only for purse seine fleet in the EEZs. For highseas, only the Commission is requested to ensure the consistent measures to be taken, which is significantly weaker decision.

In general, agreeing on a TAC and its allocations among CCPs (quota) are getting increasingly difficult for many RFMOs, as there is always a larger fleet to catch that TAC available for sharing the TAC. This is the reason for management of fishing capacity is essential on global basis. As WCPFC is the newest RFMO, WCPO has not adopted many management schemes until recently, particularly for longline fishery. Therefore, any capacity overflowed from the other oceans where RFMOs had adopted many regulations entered into this area. In the case of purse seiners, it is no doubt that the Palau Arrangement was functioning as restrictive power. Nevertheless, the 205 vessel limit has achieved only in last few years. Therefore, increasing purse seine fishing capacity has occurred without any doubt.

Recently, FFA moved from management of number of purse seine vessels to vessel days scheme (VDS). In principle, this is a right approach as vessel days will be more closely related to fishing capacity than number of vessels, accounting the increasing efficiency. However, as the new VDS (see Appendix 4) is very complicated in its managements; particularly in relation to the allocation scheme of TAE. Many conflicts are expected over the allocation between island states and long distant fishing nations. Also the Palau Arrangements refer only to the EEZs of PNA. WCPFC will start to undertake the work in determining criteria for allocation, at the next meeting in December, 2006. Again, if the current formulas are to be respected, there is a very little hope that all the CCPs would reach a consensus in a short period. But it should be remembered as overall fishing capacity increases, it would become more and more difficult to gain a onsensus.

As already discussed in Section 3.5, some of the capacity allocated to distant nations may not be fully utilized (e.g. U.S. fleet). In such a case, how the effort management and its allocation plan will comply with the situation still remains to be solved.

In the WCPFC, the capacity management on right-based scheme, as recommended by the FAO two sessions seemed to have met a consensus. However, the allocation problem particularly related to the coastal state right, historical right and actual fishing capability is very serious as EEZs have very special weight in the WCPO. Also there are highseas completely encircled by EEZs in the tropical area. There are some arguments if TAC or TAE can be first allocated into EEZs and highseas. The author believes that such separation would be very difficult on scientific basis.

6. Reference

Bayliff, W.H., Leiva Moreno, J.L. de, Majkowski, J. (eds). 2005, Report of the Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics". Madrid, Spain, 15-18 March 2004. FAO Fisheries Proceedings, No.2: 2005, Rome

Gillett, R. D. 2005. Global study on non-industrial tuna fisheries. In: Bayliff, W.H.; Leiva Moreno, J.L.de; Majkowski, J. (eds). Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics". Madrid, Spain, 15-18 March 2004. FAO Fisheries Proceedings, No.2: 171-231. Rome.

Gillett, R., 2005, Global study of non-industrial tuna fisheries In: Bayliff, W.H.; Leiva Moreno, J.L. de; Majkowski, J. (eds). Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics". Madrid, Spain, 15-18 March 2004. FAO Fisheries Proceedings, No.2: 171-232, Rome.

Hampton, J. 2006, Estimates of large-scale purse seine and longline fishing capacity in the western and central Pacific based on stock assessments of target species. Methodological Workshop on the Management of Tuna Fishing Capacity: La Jolla, CA, May 8-12, 2006; P10/A7

Hampton1, J., Langley, A. and Kleiber, P., 2006, Stock assessment of yellowfin tuna in the western and central Pacific ocean, including an analysis of management options, WCPFC-SC2-2006/SA WP-1

ISC, 2006, Report of the sixth meeting of the International Scientific Committee for tuna and tuna-like species in the North Pacific Ocean, March 23-27, La Jolla, California U.S.A., 2006

Joseph, J. 2005. Past developments and future options for managing tuna fishing capacity, with special emphasis on purse-seine fleets. In: Bayliff, W.H.; Leiva Moreno, J.L. de; Majkowski, J. (eds). Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics". Madrid, Spain, 15-18 March 2004. FAO Fisheries Proceedings, No.2: 281-323. Rome.

Joseph, J., Squires, D., Bayliff, W. and Groves, T. 2006, Requirements and Alternatives for the limitation of Fishing Capacity in Tuna Purse-Seine Fleets, Methodological Workshop on the Management of Tuna Fishing Capacity: La Jolla, CA, May 8-12, 2006; P18

Leiva Moreno, I. and Majkowski, J. 2006, Measurement of the Global Fishing Capacity of Large Scale Tuna Purse Seiners, Methodological Workshop on the Management of Tuna Fishing Capacity: La Jolla, CA, May 8-12, 2006; P20/A12

Miyake, P.M., 2006, Factors affecting on recent development in tuna longline fishing capacity and possible options for management of longline capacity, Methodological Workshop on the Management of Tuna Fishing Capacity: La Jolla, CA, May 8-12, 2006; P14/A9&10

Miyake, P.M., 2005, A review of the fishing capacity of the longline fleets of the world; In: Bayliff, W.H.; Leiva Moreno, J.I. de; Majkowski, J. (eds.) Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics. Madrid, Spain 15-18 March 2004 FAO Fisheries Proceedings No. 2. FAO Rome

Raid, C. and Squires, D. 2006, Measuring Fishing Capacity in Tuna Fisheries: Data Envelopment

Analysis, Industry Surveys and Data, Methodological Workshop on the Management of Tuna Fishing Capacity: La Jolla, CA, May 8-12, 2006; P5/A8

Reid, C., Kirkley, J., Squires, D. & Ye, J. 2005. An analysis of the fishing capacity of the global tunapurse-seine fleet. In: Bayliff, W.H.; Leiva Moreno, J.L. de; Majkowski, J. (eds). Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics". Madrid, Spain, 15-18 March 2004. FAO Fisheries Proceedings, No.2: 117-156. Rome.

Western and Central Pacific Fisheries Commission, 2005, Report of the First Regular Session of the Scientific Committee, Noumea, New Caledonia, 8-19 August 2005, (Pohnpei, Secretariat of the WCPFC, 2005)

Williams, P. and Reid, C., 2006. Overview of tuna fisheries in the western and central pacific ocean, Including economic conditions – 2005, WCPFC-SC2-2006/GN WP-1

APPENDIX 1 Final act of MHLC

FINAL ACT OF THE MULTILATERAL HIGH-LEVEL CONFERENCE ON THE CONSERVATIO AND MANAGEMENT OF HIGHLY MIGRATORY FISH STOCKS IN THE WESTERN AND CENTRAL PACIFIC

I. INTRODUCTION

1. Following the entry into force, on 16 November 1994, of the 1982 United Nations Convention on the Law of the Sea, the South Pacific Forum Fisheries Agency, in December 1994, convened a multilateral high-level conference on South Pacific tuna fisheries. The broad objective of the conference was to promote responsible fishing operations for fishing vessels operating in the South Pacific region, particularly in the light of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks and the FAO Code of Conduct for Responsible Fisheries. Subsequently, following the adoption, in 1995, of the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, a second multilateral conference was convened in June 1997 in order to consider issues relating to the establishment of a regional mechanism for the conservation and management of highly migratory fish stocks. That conference agreed that further sessions of the conference should be convened with a view to the establishment of a regional mechanism for conservation and management of the highly migratory fish stocks of the Western and Central Pacific within an overall time-frame of three years from June 1997.

II. SESSIONS

- 2. The sessions of the Multilateral High-Level Conference on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific were held as follows:
- First session held at Honiara, Solomon Islands, 1 to 5 December 1994;
- Second session held at Majuro, Marshall Islands, 10 to 13 June 1997;
- Third session held at Tokyo, Japan, 22 to 26 June 1998;
- Fourth session held at Honolulu, Hawaii, 10 to 19 February 1999;
- Fifth session held at Honolulu, Hawaii, 6 to 15 September 1999;
- Sixth session, held at Honolulu, Hawaii, 11 to 19 April 2000;
- Seventh session, held at Honolulu, Hawaii, 30 August to 5 September 2000.
- 3. In addition, the Conference mandated a number of technical consultations for the consideration of specific technical issues relevant to the work of the Conference. Such technical consultations were held as follows:
- . Technical consultation on the collection and exchange of fisheries data, tuna research and stock assessment, held at Noumea, New Caledonia, 15 to 19 July 1996;
- . Technical consultation on fishing vessel monitoring systems, held at Suva, Fiji, 13 to 15 November 1996;
- . Intersessional technical consultation on issues relating to fisheries management held at Honiara, Solomon Islands, 1 to 5 December 1997;
- . Intersessional technical consultation on issues relating to monitoring control and surveillance held at Suva, Fiji, 10 to 13 March 1998.

III. PARTICIPATION IN THE CONFERENCE

4. Participation in the first session of the Conference was by invitation of the South Pacific Forum Fisheries Agency, as convenor of the Conference. Subsequently, other States, territories and fishing entities with an interest Majuro Declaration of 13 June 1997.

- 2 -

in the highly migratory fish stocks in the region were invited to participate in the Conference, either as full participants, or as observers.

States, territories and fishing entities that participated at sessions of the Conference

Australia, Canada,² China, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Indonesia,³ Japan, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America, United Kingdom of Great Britain and Northern Ireland, on behalf of Pitcairn, Henderson, Ducie and Oeno Islands,⁴ Vanuatu, Wallis and Futuna.

Observers that participated at sessions of the Conference

States and entities

Canada (second and third sessions)

Ecuador (sixth and subsequent sessions)

European Commission (fourth and subsequent sessions)

Mexico (fifth and subsequent sessions)

United Kingdom of Great Britain and Northern Ireland, on behalf of Pitcairn, Henderson, Ducie and Oeno Islands (fifth session)

Intergovernmental organizations and South Pacific regional organizations

Asian Development Bank

Commission for the Conservation of Antarctic Marine Living Resources

Food and Agriculture Organization of the United Nations

Forum Secretariat

Inter-American Tropical Tuna Commission

OLDEPESCA

Pacific Community

South Pacific Applied Geoscience Commission

South Pacific Forum Fisheries Agency

South Pacific Regional Environment Programme

University of the South Pacific

Western Pacific Fisheries Consultative Committee.

IV OFFICERS

5. At the first session, the Conference elected Mr Robin Yarrow (Fiji) as its Chairman. At the second session, Mr Satya N. Nandan (Fiji) was elected as the Chairman of the Conference. Mr Michael W. Lodge served as Secretary of the Conference. The Food and Agriculture Organization of the United Nations, provided an officer, Mr Blaise Kuemlangan, to serve as technical adviser to the Conference.

V. MAIN DOCUMENTS OF THE CONFERENCE

- 6. The following is a list of the main documents and resolutions issued during the Conference. In addition to these documents, official accounts of the work of the Conference may be found in the statements of the Chairman issued at the end of each session and published in the reports of the Conference. Additional information on the
- ² Admitted as a participant at the fourth session.
- 3 Indonesia participated from the third session.
- 4 Admitted as a participant at the sixth session.
- ⁵ An official report was issued by the South Pacific Forum Fisheries Agency after each session of the Conference.

- 3 -

issues considered by the Conference may be found in the information notes issued by the Chairman prior to each session.6

- Maiuro Declaration of 13 June 1997
- MHLC/WP.1 (22 June 1998) Draft Articles for a Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- MHLC/WP.1/Rev.1 (26 June 1998) Revised Draft Articles for a Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- MHLC/WP.1/Rev.2 (19 February 1999) Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- MHLC/WP.2 (20 July 1999) Draft Preamble and Final Clauses for a Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- MHLC/WP.1/Rev.3 (9 September 1999) Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- MHLC/WP.1/Rev.4 (16 September 1999) Revised Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific, Prepared by the Chairman.
- Resolution of 19 February 1999, relating to the exercise of restraint in the expansion of fishing effort.
- Resolution of 15 September 1999, relating to future participation in the Conference.
- MHLC/Draft Convention (17 April 2000).
- MHLC/WP.3/Rev.1 (19 April 2000) Draft resolution relating to the establishment of a Preparatory Conference for the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific.
- MHLC/Draft Convention/Rev.1 (19 April 2000).
- MHLC/WP.3/Rev.2 (19 April 2000) Draft resolution relating to the establishment of a Preparatory

Conference for the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific.

MHLC/Draft Convention/Rev.2 (2 September 2000).

VI. WORK OF THE CONFERENCE

- 7. The first session of the Conference was convened at Honiara, Solomon Islands, in December 1994. The work of the session consisted of a general debate on issues relating to the establishment of a regional mechanism for the conservation and management of highly migratory fish stocks. The topics of discussion at the first session included the status of highly migratory fish stocks in the region, collection and exchange of catch data, transhipment, transponder technology and enforcement. Participants in the first session reached a common understanding on the need for sustainable development of the tuna resources of the western and central Pacific Ocean, the importance of responsible fishing and the need for effective cooperation between coastal States and distant water fishing nations in the conservation and management of highly migratory fish stocks in the region.

 8. Following the first session of the Conference two technical consultations took place. A technical consultation on the collection and exchange of fisheries data took place at Noumea, New Caledonia, from 15 to 19 July 1996. A technical consultation on a regional vessel monitoring system took place at Suva, Fiji, from 13 to 15 November 1996.
- 9. The second session of the Conference was convened at Majuro, Marshall Islands, in June 1997, following the adoption of the United Nations Fish Stocks Agreement, in order to consider issues relating to the establishment of a regional mechanism for the conservation and management of highly migratory fish stocks. At the end of the second session, the Conference adopted the Majuro Declaration in which participants in the Conference declared, amongst other things, their commitment to establish a mechanism for the conservation and management of highly 6 The information notes are included in the reports of the Conference.
- migratory fish stocks in the Western and Central Pacific Ocean in accordance with the 1982 Convention and the United Nations Fish Stocks Agreement within an overall time-frame of three years from June 1997.

 10. Also at the second session, the Conference mandated two intersessional technical consultations on issues relating to fisheries management and on issues relating to monitoring, control and surveillance. The intersessional technical consultation on issues relating to fisheries management was held at Honiara, Solomon Islands, from 1 to 5 December 1997. Mr Albert S. Wata (Solomon Islands) served as chairman of the technical consultation. The intersessional technical consultation on issues relating to monitoring control and surveillance was held at Suva, Fiji Islands, from 10 to 13 March 1998. Mr Grant Bryden (New Zealand) served as chairman of the technical consultation
- 11. At the third session, the Chairman tabled a working paper containing draft articles for a Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MHLC/WP.1). At the end of the third session, the Chairman issued a revised version of his working paper (MHLC/WP.1/Rev.1).
- 12. At the fourth session, the Conference continued its consideration of the Chairman's revised draft articles. At the end of the fourth session, the Chairman prepared a new revision of the draft articles in the form of a negotiating text, entitled "Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean" (MHLC/WP.1/Rev.2). The Conference also adopted a resolution relating to the exercise of restraint in the expansion of future fishing effort. In July 1999, prior to the fifth session of the Conference, the Chairman issued a further working paper containing a draft Preamble and Final Clauses for a Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MHLC/WP.2).
- 13. At the fifth session, the Conference considered further the negotiating texts prepared by the Chairman (MHLC/WP.1/Rev.2 and MHLC/WP.2). In the light of the discussions, the Chairman introduced a further revision of the negotiating text under symbol MHLC/WP.1/Rev.3. The Conference considered the revised negotiating text prepared by the Chairman and, at the end of the fifth session, in the light of the discussions, the Chairman issued a further revision of the negotiating text under symbol MHLC/WP.1/Rev.4 entitled Revised Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. Also at the fifth session, the Conference adopted a resolution relating to future participation in the Conference.

 14. At the sixth session, the Conference considered the revised text of the Draft Convention (MHLC/WP.1/Rev.4). At the beginning of the sixth session, the Conference established two informal groups to consider and report on issues relating to financial and budgetary matters and the observer programme. Mr Grant Bryden (New Zealand) and Mr Feleti Teo (Tuvalu) served as chairmen of the informal groups. Following

consideration of specific issues in informal groups, the Chairman issued on 17 April 2000 a proposal for

consideration by the Conference entitled "Draft Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean" (MHLC/Draft Convention).

15. Prior to the sixth session, the Chairman issued a working paper containing a draft resolution establishing a Preparatory Conference for the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MHLC/WP.3). The Conference considered the draft resolution at the sixth session and, in the light of the discussions, the Chairman issued a revised version of the draft resolution under symbol MHLC/WP.3/Rev.1. At the end of the sixth session the Chairman issued a further revised text of his proposal (MHLC/Draft Convention/Rev.1) and a further revised text of a draft resolution establishing a Preparatory Conference for the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MHLC/WP.3/Rev.2).

16. The seventh session had been declared as the final decision-making session of the Conference. Following deliberations on key outstanding issues, the Chairman issued on 2 September 2000, for consideration by the Conference, a revised text of the "Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean." (MHLC/Draft Convention/Rev.2). In the light of concerns raised by some delegations, the Chairman continued to hold informal consultations on outstanding issues in relation to the -5-

revised text and re-issued the text of the Draft Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean." (MHLC/Draft Convention/Rev.2*).

17. On 4 September 2000, the Chairman informed the Conference that all efforts at reaching general agreement had been exhausted. On the same date, the Chairman formally presented to the Conference the text of the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean as well as the draft resolution establishing a Preparatory Conference for the establishment of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean. The Convention, together with the resolution, was adopted on 4 September 2000 by a vote.7 On the same date, the Conference also adopted a resolution expressing gratitude to the Governments of Solomon Islands, Marshall Islands, Japan and United States of America for hosting the sessions of the Conference. The resolutions adopted by the Conference are annexed to this Final Act.

18. The Conference decided to resume its seventh session on 5 September 2000 for a ceremony of signature of the Convention and this Final Act.

IN WITNESS WHEREOF the undersigned representatives of the States, territories and fishing entities which participated in the Conference have signed this Final Act.

DONE at Honolulu this fifth day of September, two thousand, in a single original. The original of this Final Act shall be deposited in the archives of the Government of New Zealand.

The Chairman of the Conference:

Satya N. NANDAN

The Secretary of the Conference:

Michael W. LODGE

Representatives of the following States signed the Final Act: Australia, Canada, Cook Islands, China, Federated States of Micronesia, Republic of the Fiji Islands, France, Indonesia, Republic of Kiribati, Republic of the Marshall Islands, Republic of Nauru, New Zealand, Niue, Republic of Palau, The Independent State of Papua New Guinea, Republic of the Philippines, Republic of Korea,8 The Independent State of Samoa, Solomon Islands, Kingdom of Tonga, Tuvalu, United States of America and Republic of Vanuatu. The Final Act was also signed by representatives of New Caledonia and Chinese Taipei.

⁷The result of the vote was 19 in favour, 2 against (Japan and Republic of Korea), with three abstentions (China, France and Tonga). Prior to the vote, Japan expressed its reservation with respect to the acceptance by the Conference of the credentials of the delegation of Indonesia.

8 In signing the Final Act, the Republic of Korea noted its objection to resolution I.

APPENDIX 2 Resolution by MHLC concerning PrepCon

RESOLUTION I

ESTABLISHING A PREPARATORY CONFERENCE FOR THE ESTABLISHMENT OF THE COMMISSION FOR THE CONSERVATION AND MANAGEMENT OF HIGHLY MIGRATORY FISH STOCKS IN THE WESTERN AND CENTRAL PACIFIC OCEAN

The Multilateral High-Level Conference on the Conservation and Management of the Highly Migratory Fish Stocks in the Western and Central Pacific Ocean,

Having adopted the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean ("the Convention") which provides for the establishment of the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean,

Having agreed on the desirability of early entry into force of the Convention,

Having decided to make the necessary arrangements for the commencement of the functions of the Commission without undue delay and to take all possible measures to ensure its effective operation,

Having decided to establish a Preparatory Conference for the fulfillment of these purposes,

Recalling its resolution of 15 September 1999, in which participants decided, <u>inter alia</u>, that requests for participation in the Conference would not be entertained until the Convention enters into force.

Decides as follows:

- 1. The Preparatory Conference shall be open to participation by the States referred to in article 34 of the Convention and by the fishing entity referred to in article 9, paragraph 2, of the Convention. The territories referred to in article 43 of the Convention may participate in the same manner as they participated in the Multilateral High-Level Conference on the Conservation and Management of the Highly Migratory Fish Stocks in the Western and Central Pacific Ocean ("the Conference"). Other States and entities that participated as observers in the Conference may participate in the Preparatory Conference as observers but shall not be entitled to participate in the taking of decisions.
- 2. The Preparatory Conference will be convened by the depositary of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean and the first session of the Conference shall take place no sooner than 180 days and no later than 240 days after the Convention is opened for signature.
- 3. The Preparatory Conference will elect its Chairman and other officers.

- 4. The Preparatory Conference will adopt its rules of procedure which shall require decisions on matters of substance to be taken by a three-fourths majority of those present and voting and decisions on questions of procedure to be taken by a majority of those present and voting.
- 5. The Preparatory Conference may provide for an interim secretariat to support its work.
- 6. The Preparatory Conference will:
- (a) prepare draft rules of procedure of the Commission;
- (b) prepare draft rules, regulations and procedures, as necessary, to enable the Commission to commence its functions, including draft regulations concerning the financial management and internal administration of the Commission;
- (c) prepare the provisional agenda for the first meeting of the Commission and, as appropriate, make recommendations relating to items thereon;
- (d) make recommendations concerning the Secretariat of the Commission in accordance with the relevant provisions of the Convention;
- (e) make recommendations concerning the establishment of the headquarters of the Commission; and
- (f) make recommendations concerning the budget for the first financial period of the Commission, including recommendations for a scheme for contributions to the budget in accordance with article 18, paragraph 2, of the Convention.
- 7. The Preparatory Conference will also endeavour to:
- (a) formulate recommendations for consideration by the Commission concerning:
- (i) the implementation of articles 11, 12, 13 and 14 of the Convention;
- (ii) the collection of data and information in accordance with article 23, paragraph 2 (a) and (b), of the Convention;
- (iii) the establishment of a record of fishing vessels in accordance with article 24, paragraph 7, of the Convention;
- (iv) the implementation of article 24, paragraphs 8, 9 and 10, of the Convention;
- (v) the implementation of article 30, paragraph 3, of the Convention;
- (b) make recommendations concerning the relationship between the Commission and existing regional institutions concerned with conservation and management of highly migratory fish stocks; and

- (c) carry out such other functions as the Conference may decide.
- 8. The Preparatory Conference will meet as often as necessary for the expeditious exercise of its functions. It will remain in existence until the conclusion of the first meeting of the Commission, at which time its property and records shall be transferred to the Commission.
- 9. The Preparatory Conference will prepare a final report on all matters within its mandate for presentation to the Commission at its first session.
- 10. The Preparatory Conference will seek provisional scientific advice on the status of skipjack, yellowfin and bigeye tuna stocks and the South Pacific albacore stock and may, if it considers necessary, recommend such conservation and management measures, including provisional harvest level, as may be necessary pending the entry into force of the Convention to ensure the long-term sustainability of stocks within the Convention Area. Any conservation and management measures recommended by the Conference will be applied on a voluntary basis.
- 11. The Preparatory Conference may make use, as appropriate, of existing regional institutions and outside sources of expertise to facilitate its work. In particular, it may obtain scientific advice from the Standing Committee on Tuna and Billfish.
- 12. The costs of the Preparatory Conference, including secretariat costs, will be met by the participants through voluntary contributions in such manner as may be agreed, taking into account, where appropriate, the need to obtain national appropriations as well as the need to minimize the costs to all participants.

APPENDIX 3 Nauru Agreement

NAURU AGREEMENT CONCERNING COOPERATION IN THE MANAGEMENT OF FISHERIES OF COMMON INTEREST

The Federated States of Micronesia, the Republic of Kiribati, the Marshall Islands, the Republic of Nauru, the Republic of Palau, Papua New Guinea and Solomon Islands,

Taking into account the work of the Third United Nations Conference on the Law of the Sea;

Noting that, in accordance with the relevant principles of international law, each of the Parties has established an exclusive economic zone or fisheries zone (hereinafter respectively called "the Fisheries Zones") which may extend 200 nautical miles from the baselines from which their respective territorial seas are measured and within which they respectively and separately exercise sovereign rights for the purposes of exploring, exploiting, conserving and managing all living marine resources;

Having regard to the objectives of the South Pacific Forum Fisheries Agency Convention and in particular the promotion of regional cooperation and coordination of fisheries policies and the need for the urgent implementation of these objectives through regional or sub-regional arrangements;

Conscious of the exploitation of the common stocks of fish, both within the Fisheries Zones and in the waters adjacent thereto, by the distant water fishing nations;

Mindful of their dependence, as developing island States, upon the rational development and optimum utilization of the living resources occurring within the Fisheries Zones and, in particular, the common stocks of the fish therein;

Recognizing that only by cooperation in the management of the Fisheries Zones may their people be assured of receiving the maximum benefits from such resources;

Desirous of establishing, without prejudice to the sovereign rights of each Party, arrangements by which this may be achieved.

Have agreed as follows:

Article I

The Parties shall seek, without any derogation of their respective sovereign rights, to coordinate and harmonize the management of fisheries with regard to common stocks within the Fisheries Zones, for the benefit of their people.

Article II

The Parties shall seek to establish a coordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels, and in particular:

- a. Shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels.
- b. Shall establish, as a minimum, uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones regarding:
 - i) The requirement that each foreign fishing vessel apply for and posses a licence or permit.
 - ii) The placement of observers on foreign fishing vessels.
 - iii) The requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities.
 - iv) The timely reporting to the competent authorities of required information concerning the entry, exit and other movement and act fishing vessels within the Fisheries Zones.
 - v) Standardized identification of foreign fishing vessels.
- c. Seek to establish other uniform terms and conditions under which the Parties may license foreign fishing vessels to fish within the Fisheries Zones, including:
- i) The payment of an access fee, which shall be calculated in accordance with principles established by the Parties.
- ii) The requirement to supply to the competent authorities complete catch and effort data for each voyage.
- iii) The requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary.
- iv) The requirement that the flag State or organizations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties.
- v) Such other terms and conditions as the Parties may, from time to time, consider necessary.

Article III

The Parties shall seek to standardize their respective licensing procedures and in particular:

a. Seek to establish and adopt uniform measures and procedures relating to the licensing of foreign fishing vessels, including application formats, licensing formats and other relevant documents.

b. Explore the possibility of establishing, without prejudice to the respective sovereign rights of the Parties, a centralized licensing system of foreign fishing vessels.

Article IV

The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in establishing procedures and administrative arrangements for the exchange and analysis of:

- a. Statistical data concerning catch and effort by fishing vessels in the Fisheries Zones relating to the common stocks of fish.
- b. Information relating to vessel specifications and fleet composition.

Article V

- 1. The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in providing secretariat services for implementing and coordinating the provisions of this Agreement.
- 2. An annual meeting of the Parties shall be convened preceding or following the regular session of the Forum Fisheries Committee in order to promote the implementation of this Agreement. Additional meetings may be convened at the request of three or more Parties. Such requests shall be communicated to the Director of the Forum Fisheries Agency who will inform the other Parties.
- 3. With the concurrence of the Parties, members of the South Pacific Forum Fisheries Agency, not Parties to this Agreement, may attend as observers -the meetings referred to in this Article

Article VI

The Parties shall, where appropriate, cooperate and coordinate the monitoring and surveillance of foreign fishing activities by:

- a. Arranging for the rapid exchange of information collected through national surveillance activities.
- b. Exploring the feasibility of joint surveillance.
- c. Developing other appropriate measures.

Article VII

The Parties shall seek to develop cooperative and coordinated procedures to facilitate the enforcement of their fisheries laws and shall in particular examine the various means by which a regime of reciprocal enforcement may be established.

Article VIII

Nothing contained in this Agreement shall be construed as a derogation of any of the rights and obligations undertaken by any of the Parties under the South Pacific Forum Fisheries Agency

Convention or any other international agreement in effect on the date on which this Agreement enters into force.

Article IX

The parties shall conclude arrangements where necessary to facilitate the implementation of the terms and to attain the objectives of this Agreement. The Parties concluding such arrangements shall lodge copies with the depositary of this Agreement.

Article X

- 1. This Agreement shall be open for signature by the States named in the preamble hereto and shall be subject to ratification.
- 2. This Agreement shall enter into force 30 days following receipt by the depositary of the fifth instrument of ratification. Thereafter it shall enter into force for any signing or acceding State 30 days after receipt by the depositary of an instrument of ratification or accession.
- 3. This Agreement shall be deposited with the Government of Solomon Islands which shall be responsible for its registration with the United Nations.
- 4. Following entry into force, this Agreement shall be open for accession by other States with the concurrence of all of the Parties to this Agreement.
- 5. Reservations to this Agreement shall not be permitted.

Article XI_

- 1. This Agreement is a binding international agreement concluded among States and is governed by international law.
- 2. Any Party may withdraw from this Agreement by giving written notice to the depositary. Withdrawal shall take effect one year after receipt of such notice.
- 3. Any amendments to this Agreement proposed by a Party shall only be adopted by unanimous decision of the Parties.

In witness whereof the undersigned, duly authorised by their respective Governments, have signed the Agreement.

Done at Nauru, this 11th day of February, One Thousand Nine Hundred and Eighty Two.

For the Government of the Federated States of Micronesia

For the Government of the Republic of Kiribati

For the Government of the Marshall Islands

For the Government of the Republic of Nauru

For the Government of the Republic of Palau

For the Government of Papua New Guinea

For the Government of Solomon Islands

APPENDIX 4 Revised Palau Arrengement

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PACIFIC PURSE SEINE FISHERY MANAGEMENT SCHEME (VESSEL DAY SCHEME)

(as amended by VDS Working Group Meeting-Honiara, 7 & 13 October 2005)

Enhancing the management of purse seine fishing vessel effort in the waters of the Parties by:

- i) promoting optimal utilization and conservation of tuna resources;
- ii) maximizing economic returns, employment generation and export earnings from sustainable harvesting of tuna resources;
- iii) supporting the development of domestic locally based purse seine fishing industries;
- iv) promoting effective and efficient administration, management and compliance;
 and
- v) encouraging collaboration between all parties.

Article 1

Definitions

1.1 In this Management Scheme:

- (i) *ALC* means Automatic Location Communicator.
- (ii) Adjusted PAE, in relation to a Party, means that Party's PAE as adjusted pursuant to Article 6,7 or 10.
- (iii) Fishing activities includes the following:
 - (a) searching for, catching, taking or harvesting fish;
 - (b) attempting to search for, catch, take or harvest fish;
 - (c) engaging in any other activity which can reasonably be expected to result in the locating, catching, taking or harvesting of fish for any purpose;
 - (d) placing, searching for or recovering fish aggregating devices or associated electronic equipment such as radio beacons, or any other equipment used in the control, support or assistance of fishing operations of any description;
 - (e) any operations at sea directly in support of, or in preparation for, any activity described in paragraphs (a) to (d);
 - (f) use of any vessel in connection with any activity described in paragraphs (a) to (e), except for emergencies involving the health and safety of the crew or the safety of a vessel.
- (iv) Fishing day means any calendar day, or part of a calendar day, during which a purse seine vessel is in the waters of a Party outside of a port, but does not include a calendar day, or part of a calendar day, referred to in Article 5.1(iii).

- (v) Length overall, in relation to a vessel, means the distance in metres (with an accuracy of two decimal places) in a straight line between the foremost point of the bow and the aftermost point of the stern, provided that the bow shall be taken to include the watertight hull structure, forecastle, stem and forward bulwark, and the stern shall be taken to include the watertight hull structure, transom, poop, skiff ramp and bulwark.
- (vi) *Management Period* means a period of three Management Years.
- (vii) *Management Year* means a period of one calendar year commencing on the date of commencement of the vessel day scheme.
- (viii) *Palau Arrangement* means the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery.
- (ix) Party Allowable Effort (PAE), in relation to a Party, means the total number of fishing days for a Management Year allocated to that Party calculated pursuant to the formula at Article 12, and presented to the Parties each year in accordance with the table at Schedule 1.
- (x) Total Allowable Effort (TAE) means the maximum number of fishing days by all licensed purse seine vessels in the waters of the Parties to the Palau Arrangement in any management year.
- (xi) VDS Register means the register established and maintained pursuant to Article 8.
- (xii) Vessel Day Scheme Management Area means the waters of the Pacific Ocean bounded as follows:
 - (a) In the north by the 20° parallel of north latitude;
 - (b) In the south by the 20° parallel of south latitude; and
 - (c) In the east by a line due north along the 130° meridian of west longitude to its intersection with the 4° parallel of south latitude; thence due west along the 4° parallel of south latitude to its intersection with the 150° meridian of west longitude; thence due north along the 150° meridian of west longitude.

Article 2

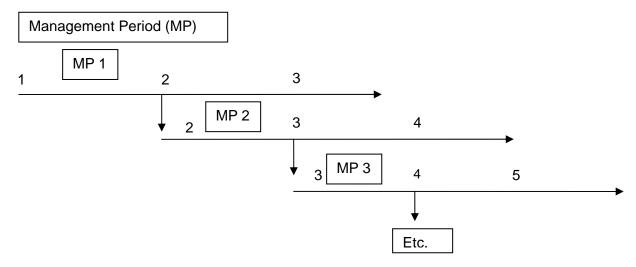
Objectives and description

- 2.1 This management scheme is made pursuant to the Palau Arrangement for the management of purse seine fishing effort of the Western and Central Pacific. The objective of this Management Scheme is to enhance the management of purse seine fishing vessel effort in the waters of the Parties by encouraging collaboration between all parties, and:
 - i) promoting optimal utilization and conservation of tuna resources;
 - ii) maximizing economic returns, employment generation and export earnings from sustainable harvesting of tuna resources;
- iii) supporting the development of domestic locally based purse seine fishing industries;
- iv) promoting effective and efficient administration, management and compliance; and
- v) encouraging collaboration between all parties.
- 2.2 Through this management scheme the Parties shall seek to limit the level of fishing by purse seine vessels in the waters of the Parties to the levels of total allowable effort agreed by the Parties to the

Palau Arrangement.

2.3 The management scheme will have a management period of three management years. At the end of each management year a new three year management period will commence. Management years and management periods will be numbered sequentially. At the beginning of the scheme a total allowable effort will be set by the Parties for each of the first three years. Prior to the end of the first year of the management scheme the Parties will meet to set the TAE for the fourth management year, as illustrated in Figure 1. Prior to the end of the second management year, and prior to the end of each subsequent management year, the Parties will meet to set the TAE for the fifth management year, and thereafter for each new management year. In the event that a TAE is not set for a new management year, the TAE for the previous management year will apply.

Figure 1 – Rolling 3 year management period



2.4 At the end of each management year any unused PAE from the corresponding management period may be carried forward to the new management period. In this respect the Parties to the Palau Arrangement may agree rules about the maximum number or maximum proportion of days that may be carried forward.

Establishment of a VDS Committee

- 2.5 Oversight of the management scheme will be the responsibility of a Vessel Days Scheme Committee (VDSC) comprising a nominee of each of the Parties to the Palau Arrangement. The VDSC will be a sub-committee of the Palau Arrangement Parties and be subject to their absolute control. The VDSC will meet as required and be subject to the following general procedures:
 - i) The VDSC will appoint a Chair and vice Chair for a period of no more than 3 years. At the end of the Chair's term the vice Chair will assume the Chair's role. Initial and ongoing appointments will be made in a manner that provides for the terms of the Chair and vice Chair to be staggered to provide continuity of experience.
 - ii) The VDSC may consider, discuss and make recommendation to any meeting of the Parties to the Palau Arrangement on any matter related to the administration of the VDS, and make decisions on matters delegated to them by the Parties to the Palau Arrangement.

Meeting procedures

iii) The committee can adopt meeting procedures as it sees fit from time to time bearing in mind that in establishing the VDSC it is the intention of the Parties to the Palau Arrangement that it operate in a manner that is as informal as is practical in order to conduct its business efficiently. In the event of any dispute over meeting procedures and in the absence of any otherwise agreed meeting procedures the meeting procedures that apply to the meetings of the Forum Fisheries Committee will apply. The Administrator will maintain a record of meeting procedures as agreed to from time to time.

Observers

iv) Observer status will only be granted to government officials representing members of the Forum Fisheries Agency. Any member wishing to attend as an observer will provide advice to the Chair of their intention to attend any meeting. As meetings of the VDSC will be informal and may be called at short notice, there may be no general notice of intended meetings to observers.

Guests

v) Any other person may be invited by the VDSC to attend certain sessions of the VDSC as a guest, on an agenda item by agenda item basis.

Confidentiality

vi) Other than for the purposes of official reporting within government observers and guests shall be bound to keep any matter discussed by the VDSC confidential other than where agreed on a case by case basis by the Chair.

Meeting agenda and record

vii) An agenda shall be prepared for each meeting. A record of each meeting shall be kept by the Administrator and cleared by the VDSC before it concludes any meeting. The record shall be brief and only record the broad points of discussion by the VDSC, along with any viewpoint expressly requested by any VDSC member to be formally recorded, and the precise outcome of any discussions whether they be in the form of a recommendation to a meeting of the Parties to the Palau Arrangement, or a decision.

Annual meeting of Parties to the Palau Arrangement

- 2.6 The annual meeting of the Parties to the Palau Arrangement will consider matters relating to the administration of the VDS. In particular, but without limiting the matters the meeting can consider, it will be a function of the annual meeting to:
 - i) Consider any matter referred to it for decision by the VDSC.
 - ii) Receive a briefing from the Administrator on catch and effort levels and any observed or potential increase in average effective fishing effort for each fishing day since the introduction of the vessel day scheme (effort creep):
 - a. In respect of any observed effort creep the Parties shall take the necessary management action to ensure such effort creep is not detrimental to the fishery.
 - b. Options for management action by the Parties shall include controls on vessel length, vessel capacity, well size, the use of fish aggregating devices or any other necessary measure.

- iii) Receive a briefing from the Administrator on any transfer of fishing days between Parties and between management periods.
 - a. In respect of any transfer of fishing days between management periods the Parties may agree on any future restrictions that may apply to the proportion of fishing days that may be borrowed from or carried forward to future years.
 - b. In respect of any deliberation on this matter the Parties will take into account the need to ensure that such transfers are not detrimental to the fishery or the fishery management scheme.
- iv) Set the TAE in accordance with the provisions of this management scheme.
- v) Consider the need to establish procedures to consult with distant water fishing nations, fishing parties, fishing organizations, and other relevant organizations and provide direction to the Administrator in that respect.
- vi) Determine controls on high seas fishing to be applied to fishing parties operating under the Vessel Days scheme or other arrangements, treaties or agreements.

Non-application to certain purse seine vessels

- 3.1 For clarification this management scheme does have effect with respect to fishing activities by a purse seine vessel operating under a valid license issued under the Federated States of Micronesia Arrangement for Regional Fisheries Access (FSMA) while it is in the national waters of the licensing home party.
- 3.2 This Management Scheme shall not apply to or affect:
 - (i) fishing activities by a purse seine vessel while it is in the national waters of a Party, other than as described in clause 3.1, under a valid license issued under the Federated States of Micronesia Arrangement for Regional Fisheries Access (FSMA); or
 - (ii) fishing activities by a purse seine vessel while it is operating under a valid license issued under the Treaty on Fisheries Between the Governments of Certain Pacific Island States and the Government of the United States of America (UST);
- 3.3 Clause 3.2 does not apply to the deliberations of the Parties to the Palau Arrangement when calculating the TAE when it will be necessary to consider the catches of FSMA and UST fleets and make adjustments to the TAE in accordance with the TAE setting process.
- 3.4 Clause 3.2 does not apply where agreed to by the Parties to the FSMA or the UST.

Article 4

Obligation to limit fishing days

4.1 Each Party shall take all necessary measures to ensure that the number of fishing days by purse seine vessels in its waters does not exceed that Party's PAE or Adjusted PAE in any Management Year other than in accordance with Article 3.

Calculation of fishing days

- 5.1 The following provisions shall govern the calculation of a Party's use of its PAE or Adjusted PAE during a Management Year, and shall be applied by the Administrator:
 - (i) If a purse seine vessel reports during any fishing day from positions in the waters of two or more Parties, that fishing day shall be apportioned between those Parties according to the distribution of reported positions of that vessel;
 - (ii) If a purse seine vessel reports during any fishing day from positions in the high seas or in the waters of non-Parties, and in the waters of one or more Parties, that fishing day shall be apportioned according to the distribution of reported positions;
 - (iii) If a Party has advised the Administrator, using the form in Schedule 2, that a purse seine vessel will be in its waters but will not be undertaking fishing activities, the days or parts of days spent by the vessel in that Party's waters will not be counted as fishing days provided the vessel does not undertake fishing activities during the period identified in the form. For that purpose, a vessel shall be deemed to be undertaking fishing activities during any time that its fishing gear is not completely stowed.
 - (iv) every fishing day by a purse seine vessel with a length overall of less than 50 metres shall equate to a deduction of one half of a fishing day;
 - (v) every fishing day by a purse seine vessel with a length overall of between 50 metres and 80 metres shall equate to a deduction of one fishing day;
 - (vi) every fishing day by a purse seine vessel with a length overall in excess of 80 metres shall equate to a deduction of one and one half fishing days.
 - (vii) there shall be no deduction of fishing days in respect of any period spent by a purse seine vessel within a port of a Party.

Article 6

PAE Adjustments: transfers between Parties

- Any two Parties may agree to a transfer between themselves of all or part of their PAE for a Management Year, provided that
 - (i) A Party may not agree to transfer to other Parties more than 100% of its PAE;
 - (ii) A Party may not agree to transfer any part of its PAE which that Party has already used at the time the request is made.
- A Party that proposes to receive a transfer of PAE pursuant to an agreement under Article 6.1 must provide a transfer notification to the Administrator, using the form set out in Schedule 3 (a) and according to any transfer administration procedures that have been agreed by the Parties on the recommendation of the Administrator, no later than 31 January of the Management Year following the Management Year that the proposed transfer relates to. The transfer will be approved by the Administrator providing it meets the requirements of the vessel day scheme.
- 6.3 If the Administrator is satisfied that the Parties have complied with the requirements of Articles 6.1 and 6.2, the Administrator shall adjust the PAE of the relevant Parties in accordance with the transfer notification.

PAE Adjustments: transfers between Management Years and Management Periods

- 7.1 A Party may instruct the Administrator to adjust its PAE for any Management Year in a Management Period by transferring to that Management Year up to 100% of its PAE from another Management Year of the same Management Period.
- 7.2 A Party may instruct the Administrator to adjust its PAE for the first Management Year in a Management Period by transferring to that Management Year up to 30% of its PAE from the final Management Year of the preceding Management Period.
- 7.3 An instruction under Article 7.1 or 7.2 is valid only to the extent that it relates to a Party's PAE which the Party has not already used at the time the request is made.
- 7.4 The Party instructing the Administrator to adjust its PAE under this Article must provide a transfer notification to the Administrator, using the form set out in Schedule 3 (b) and according to any transfer administration procedures that have been agreed by the Parties on the recommendation of the Administrator, no later than 31 January of the Management Year following the Management Year that the proposed transfer relates to.
- 7.5 If the Administrator is satisfied that the Party has complied with the requirements of this Article, the Administrator shall adjust that Party's PAE in accordance with the transfer notification.

Article 8

Register of Purse Seine Vessels

- 8.1 The Administrator shall establish and maintain a Register of Purse Seine Vessels under the Palau Arrangement Purse Seine Fishery Vessel Day Scheme (the VDS Register).
- 8.2 A purse seine vessel must be registered on the VDS Register in order to undertake fishing activities pursuant to this Management Scheme. Each Party shall ensure that every license of a purse seine vessel includes a condition that no fishing activity may be undertaken pursuant to the licence during any period when the vessel is not registered on the VDS Register.
- 8.3 A purse seine vessel may only be registered on the VDS Register if:
 - (i) An application for the vessel to be registered on the VDS Register is made to the Administrator using the form set out in Schedule 4; and
 - (ii) The application form is accompanied by payment of the Registration Fee set out in Schedule 5: and
 - (iii) The Administrator is satisfied that the vessel will be able to comply with the requirements of this Management Scheme; and
 - (iv) The vessel is in good standing on the FFA Vessel Register
- 8.4 The Administrator must register a purse seine vessel on the VDS Register if the requirements of Article 8.3 have been satisfied in relation to that vessel. Upon a purse seine vessel becoming registered on the VDS Register, the Administrator must notify the vessel owner and the relevant Party of that fact, and of the commencement date of the registration.
- 8.5 Subject to Article 8.6, the registration of a purse seine vessel on the VDS Register shall remain in effect until the end of the Management Period. A purse seine vessel that is registered on the VDS

Register at the end of a Management Period shall be entitled to have its registration continued for the following Management Period, provided that the vessel fulfils the registration requirements, set out in Article 8.3, no later than 30 days prior to the commencement of that following Management Period.

- 8.6 The Administrator must delete a vessel from the VDS Register if:
 - (i) The vessel owner requests the Administrator to delete the vessel from the VDS Register; or,
 - (ii) A Party requests that a vessel be deleted from the VDS Register; or
 - (iii) The Administrator is satisfied that the vessel has failed to comply with the requirements of this Management Scheme.
- 8.7 The Administrator shall not delete a purse seine vessel from the VDS Register pursuant to Article 8.6 unless the Administrator first consults with the Parties about the proposed deletion, and no Party objects to the proposed deletion of the vessel from the VDS Register. If the Administrator deletes a vessel from the VDS Register, the Administrator must notify the vessel owner and any relevant Party of the fact and date of the deletion. A purse seine vessel that has had its registration on the VDS Register deleted must satisfy the requirements of Article 8.3 in order to be registered again on the VDS Register.
- 8.8 The Administrator shall provide monthly notifications to all Parties of changes to the VDS Register, including details of new vessel registrations and deletions of vessel registrations. The Administrator shall also maintain the VDS Register on a secure internet website that is accessible only by the Parties and the Administrator.

Article 9

Monitoring

- 9.1 A purse seine vessel must have an ALC operating at all times of a Management Period during which it is registered on the VDS Register and within the Vessel Day Scheme Management Area, and must ensure that the ALC provides location transmissions at intervals of at least every 4 hours.
- 9.2 If the Administrator does not receive either an ALC transmission from a purse seine vessel to which Article 9.1 applies, or a transmission failure report from a purse seine vessel pursuant to Article 9.3, the Administrator shall notify the vessel of the transmission failure no later than 12 hours after the ALC transmission was due, and require the vessel to submit transmission failure reports to the Administrator pursuant to Article 9.3.
- 9.3 If a purse seine vessel becomes unable to transmit by ALC for any reason, the operator of the vessel shall, as soon as practicable, submit a transmission failure report, in the form set out in Schedule 6, to the Administrator and to any Party in whose waters the vessel is undertaking fishing activities. The first transmission failure report shall account for the period from the time of the ALC transmission failure to the time of submission of the report. Subsequent transmission failure reports shall be submitted at intervals of 4 hours.
- 9.4 If at any time a purse seine vessel is unable to comply with the requirements of this Article, the master of that vessel must immediately stow the vessel's fishing gear and take the vessel directly to the nearest port, or such other port as the Administrator directs, and immediately report to the Administrator of its actions under this Article.

Article 10

Compliance

10.1 Each Party shall take all necessary measures to ensure that every purse seine vessel that is

licensed to fish in its waters, and every purse seine vessel that is entitled to fly its flag, comply with the requirements of this Management Scheme.

- 10.2 If a Party exceeds its PAE or Adjusted PAE at any time during a Management Year, the Administrator shall, within 7 days, notify the Party of that fact. That Party shall report to the Administrator within 21 days on its measures to ensure adherence to its PAE or Adjusted PAE, including any arrangements for transfer of PAE pursuant to Article 6 or Article 7.
- 10.3 If the level of purse seine fishing in the waters of a Party exceeds its PAE for a Management Year, that Party's PAE for the following Management Year shall be adjusted by deducting:
 - (i) If the excess is less than 100 days the amount of the excess;
 - (ii) If the excess is 100 days or more 120% of the excess.
- 10.4 The Administrator shall promptly provide a report to all Parties with details of any PAE adjustment pursuant to this Article, and a statement of that Party's Adjusted PAE for any Management Year affected by the adjustment.

Article 11

Administrator

- 11.1 The Administrator of this Management Scheme shall be the Director- General of the Forum Fisheries Agency.
- 11.2 The Administrator shall have the following functions:
 - (i) performing any function that this Management Scheme requires the Administrator to perform;
 - (ii) receiving information and documents from the Parties;
 - (iii) receiving Registration Application Fees pursuant to Article 8.3(ii);
 - (iv) convening meetings of the Parties pursuant to this Article;
 - (v) performing any function that the Parties direct the Administrator to perform;
 - (vi) performing any function that is necessary for the effective administration of this Management Scheme.
- 11.3 The Administrator shall perform their functions consistently with any direction given by the Parties. The Administrator shall consult with the Parties as required and take all necessary steps to ensure that reports and information required to be provided by Parties are provided on time.
- 11.4 The Administrator shall apply fees collected pursuant to this Management Scheme as directed by the Parties. The Administrator shall prepare an annual budget for this Management Scheme, for consideration and approval by the Parties at the annual Management Meeting under the Palau Arrangement.
- 11.5 The Administrator shall convene a special meeting of the Parties to consider the operation of this Management Scheme if the Administrator receives a written request for such a meeting, and where that request is supported by a minimum of 3 additional Parties.

Calculation of TAE and PAE

12.1 The TAE is the maximum number of fishing days undertaken by all licensed purse seine vessels in all waters of the Parties to the Palau Arrangement in any management year.

Calculation of the TAE

- 12.2 The TAE will be set by the Parties at their annual meeting or at such other time agreed to by the Parties having regard to:
 - i) the best available scientific, economic, management and other relevant advice and information;
 - the provisions of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean;
 - iii) the objectives of the Vessel Day Scheme; and,
 - iv) any submission on this issue from any party, individual or organisation.

Allocation of the TAE among the Parties

- Prior to the allocation of the TAE amongst the Parties the TAE shall be adjusted by making a deduction from the TAE in accordance with clause 12.7.
- The adjusted TAE shall be allocated amongst the Parties as their party allowable effort (PAE).
- 12.5 The PAE for each Party shall be expressed as a percentage. The formula for calculating the PAE of each Party shall be that 50 percent of the PAE is based on the distribution of the assessed relative biomass of skipjack and yellowfin within the waters of the Parties for this purpose the average shall be taken over a ten (10) year period using the most recent available data; and 50 percent on the average of the annual distribution of the number of vessel days fished in the waters of the Parties for this purpose the average shall be taken over a seven (7) year period using the most recent available data.
- 12.6 The Parties may have regard to the special circumstances of any member and agree to a temporary increase in the PAE on an annual basis. Such temporary increases shall not automatically be granted in the following year.

Allocation of TAE for the FSMA and the US Treaty Fleets

12.7 Prior to the allocation of the TAE amongst the Parties, an amount of fishing days will be allocated to each of two pools of fishing days. One pool will be maintained for the Federated States of Micronesia Arrangement for Regional Fisheries Access (FSMA), and one pool for the Treaty on Fisheries between the Governments of Certain Pacific Islands States and the Government of the United States of America (US Treaty). These pools of fishing days will be calculated on the basis of the average number of days fished by these fleets over a 7 year period using the most recent available data.

Updating of PAE

12.8 Each PAE shall be updated every year using the formula described in clause 12.5 using the most recent data.

Article 13

Amendment to the Vessel Days Scheme

13.1 This vessel days scheme may be amended in any respect by the agreement of the Parties to the Palau Arrangement.

Article 14

Fees for administration of the Vessel Days Scheme and charges for vessel days

- 14.1 The Parties to the Palau Arrangement may, at any meeting, agree upon or vary any fees to be charged by vessels registered to operate under the vessel days scheme and the scheme for administration of any such fees.
- 14.2 The Parties to the Palau Arrangement may, at any meeting, agree upon a scheme for standardising fees for the sale of vessel days.

Article 15

Transitional Provisions

- 15.1 At the commencement of the management scheme the Parties agree that the management scheme be applied on a provisional basis for an agreed period which shall be known as the transitional period, for the purposes of providing time for negotiations with fishing parties, and to monitor and to trial the implementation. The Parties may extend the transitional period for a further duration if the Parties consider it necessary.
- 15.2 The first management period would commence at the end of the agreed transitional period.
- 15.3 The Parties agree to maintain Schedule 7 of the Management Scheme during the transitional period.
- 15.4 During the transitional period of the management scheme, decisions pertaining to the implementation of the management scheme may only be made by Parties who have agreed to apply the scheme.

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME)

SCHEDULE 1

MANAGEMENT SCHEME DETAILS					
Management Period:	(#)				
First Management Period:	(date commencing)				
Total Allowable Effort (TAE) for each year (as agreed by the Parties) of First Management Period:					
Party		Annual Percentage Party Allowable Effort (PAE) for # Management Period			
		Year#	Year #	Year #	
Federated States of Micronesia					
Kiribati					
Marshall Islands					
Nauru					
Papua New Guinea					
Palau					
Solomon Islands					
Tuvalu	valu				

(The formula for calculating the PAE of each party shall be that 50 percent of the PAE is based on the distribution of the assessed relative biomass of skipjack and yellowfin within the waters of the Parties - for this purpose the average shall be taken over a ten (10) period using the most recent available data; and 50 percent on the average of the annual distribution of the number of vessel days fished in the waters of the Parties - for this purpose, the average shall be taken over a seven (7) year period using the most recent available data).

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME) SCHEDULE 2

REPORT TO ADMINISTRATOR ON VESSELS IN ZONE NOT ENGAGED IN FISHING ACTIVITIES

Party Submitting Report:
Zone:
Name of vessel:
Vessel's International call sign:
Vessel's VDS Register Registration No (if applicable):
FFA Vessel Register No. (if applicable):
Date and time of entry into Party's waters:
Date and time of proposed exit from Party's waters:
Date and time of cessation of fishing activity:
Date and time of recommencement of fishing activity:
State reason for vessel's presence in the Party's waters:

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME) SCHEDULE 3 (a)

PART A

PAE TRANSFER NOTIFICATION: PARTY-PARTY TRANSFER

[Name of Pa	arty from which PAE to be transferred] notifies the Administrator to effec	t a
transfer of	fishing days of its PAE for Management Year 20 to [name of Party to rece	ive
transfer].		
Amount of P	AE to be transferred	
(in fishing da	nys):	
[Authorised	Officer]	
- Name:	- 	
Telephone:		
Facsimile:		
T .1		

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME) SCHEDULE 3 (b)

PART B

PAE TRANSFER NOTIFICAITON: TRANSFER BETWEEN MANAGEMENT YEARS

[Name of Party requesting transfer] notifies the Administrator t	o effect a transfer of fishing
days of its PAE for Management Year 20 as follows:	
Management Year to which	
fishing days to be transferred:	
Amount of fishing days to be	
transferred (tick relevant box):	
☐ Total fishing days available for transfer	
□ fishing days	
[Authorised Officer]	
Name:	
Telephone:	
Facsimile:	
Email:	

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PACIFIC PURSE SEINE FISHERY - MANAGAMENT SCHEME (VESSEL DAY SCHEME)

SCHEDULE 4

APPLICATION FOR REGISTRATION

FISHERIES	S Scheme Register
	FOR REGISTRATION
Vessel —	Applicant details
Name of vessel	Name
Flag of vessel	Mailing address
International Radio Call Sign Flag State Registration Number	
	Phone number Fax number
FFA Vessel Monitoring System Details ————	
FFA VMS type-approved ALC installed?	E-mail address
No Yes Inmarsat number	
Vessel Specifications—	Tick the box that applies to you
Vessel Length (please complete all lengths for which information is available	· ·
Length Overall Registered Length	
	Application period
Length between perpendiculars Length specified as:	from Month Year to Month Year
metres feet	
Please send your completed form to:	Applicant declaration I hereby apply for good standing of the (name of vessel)
Forum Fisheries Agency 1 FFA Road, Kola'a Ridge Phone: (+677) 21124	The bay apply to good standing of the (mains of secon)
P.O. Box 629 Fax: (+677) 23995 Honiara E-mail: mcs@ffa.int	on the Vessel Days Register maintained by the Forum Fisheries Agency.
Solomon Islands	I declare that, to the best of my knowledge, there are no outstanding matters pending in relation to this vessel or its use.
Privacy and your information Information provided to the Forum Fisheries Agency on	I declare that the information provided in this Application for Registration,
this form is confidential. Further information about VDS Registration, including instructions regarding remittance	signed by me, is true and complete. Signature
of VDS Registration fees, will be provided in a separate notice.	ognature
	Date Day Month Year

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME)

SCHEDULE 5

SCHEDULE OF FEES PAYABLE PURSUANT TO THE MANAGEMENT SCHEME

(all fees are stated in United States Dollar)

Fee Description	Amount
Registration Fee	\$2,400:00*

^{*} The Registration Fee is for the 3 year management period and may be paid in equal annual instalments of \$800, provided that each instalment must be paid in advance of the commencement date of the management year. Late payments will attract a 10% penalty charge. There will be no pro-rata reduction of fees for late payments or payments received part way through a fishing year.

PALAU ARRANGEMENT FOR THE MANAGEMENT OF THE WESTERN PURSE SEINE FISHERY - MANAGEMENT SCHEME (VESSEL DAY SCHEME)

SCHEDULE 6

INFORMATION FOR INCLUSION IN A TRANSMISSION FAILURE REPORT

THE FOLLOWING INFORMATION MUST BE INCLUDED IN ANY TRANSMISSION FAILURE REPORT:

Date (dd/mm/yyyy):

Vessel Name:

Call Sign:

ALC Make and model:

ALC Serial Number:

Position of last ALC transmission (at four -hour intervals):

Position of last manual transmission:

Operator/Captain Name:

Observer's Name (if applicable):

Schedule 7

Purse Seine Licence Numbers

Category	Agreed, May 2004	Agreed, June 2005	Reported, June 2005	Variance
1. Multilateral Access				
U.S. Treaty	40	40	16	-24
2. Bilateral Foreign Access				
Japan	35	35	34	-1
Taiwan	33	33	33	0
South Korea	27	27	27	0
Philippines	10	10	10	0
China	4	4	4	0
European Union	4	4	3	-1
Sub-total (1+2)	153	153	127	-26
3. Domestic / Locally-based				
All parties	52	52	52	0
Total ((1+2) + 3)	205		179	-26

^{*}Note: Fleets that fail to fully utilise their allocation will be liable to forfeit their unused allocation.

Special Arrangements¹

Category	Agreed, Aug. 2004	Agreed, June 2005	Reported, June 2005	Variance
1. EU vessels part-time in Kiribati waters only	2	2	0	-2
2. Domestic/Locally Based	9	15	8	-7
3. China	2	4	4	0
4. South Korea	1	1	1	0
5. Philippines	0	1	1	0
6. Taiwan	0	1	1	0

¹ This category will remain in force as long as the number of US vessels is below its maximum allocation of 40 vessels.

APPENDIX 5 WCPFC management decisions

A5-1. WCPO bigeye and yellowfin tuna

CONSERVATION AND MANAGEMENT MEASURES FOR BIGEYE AND YELLOWFIN TUNA IN THE WESTERN AND CENTRAL PACIFIC OCEAN

Conservation and Management Measure-2005-01

Recalling the objective of this Convention is to ensure through effective management, the longterm conservation and sustainable use of the highly migratory fish stocks of the Western and Central Pacific Ocean in accordance with the 1982 Convention and the Agreement.

Recognizing that the Scientific Committee expressed concern on current stock status of bigeye and yellowfin tunas and recommended reduction in the current fishing mortality for bigeye and yellowfin.

Noting that the Commission shall give full recognition to the special requirements of developing States and participating territories parties to this Convention, in particular small island developing states and territories and possessions, in relation to the conservation and management of highly migratory fish stocks in the Convention Area and development of fisheries on such stocks (Article 30).

Decides to adopt, in accordance with Article 10 of the Convention, the following measures with respect to bigeye tuna and yellowfin tuna, in particular.

GENERAL RULES OF APPLICATION

- 1. Through the adoption of necessary measures, the total level of fishing effort for bigeye and yellowfin tuna in the Convention Area shall not be increased beyond current levels².
- 2. These measures will be reviewed annually and may be adjusted, considering the advice of the Scientific Committee concerning fishing mortality levels associated with maintaining the bigeye and yellowfin stocks at or above BMSY in accordance with Article 5 in the Convention.
- 3. Commission Members, Cooperating Non-Members and participating Territories (CCMs) shall take necessary measures to ensure that their fishing vessels be transferred to other CCMs only when such transfers do not result in overfishing in the Convention Area.
- 4. The Scientific Committee, at its second meeting, shall identify levels of fishing effort to ensure that the bigeye and yellowfin stocks will remain at an agreed level above BMSY.
- 5. For the purposes of these measures, vessels operated under charter, lease or other similar mechanisms by developing islands States and participating territories, as an integral part of their domestic fleet, shall be considered to be vessels of the host island state or territory. Such charter, lease or other similar mechanism shall be conducted in a manner so as not to invite IUU vessels. The Commission shall develop a Charter Arrangements Scheme, which will include notification provisions, at its third Session in 2006.

⁻

²Current level of fishing effort shall include fishing rights authorized under existing regional or bilateral fisheries partnership arrangements or agreements, provided these are registered with the Commission, and provided that the number of licences authorized under such arrangements does not increase. CCMs will register their bilateral agreements or arrangements with the Commission in advance of the Third Session of the Commission in 2006.

6. Nothing in this decision shall prejudice the legitimate rights and obligations of those small island state Members and participating territories in the Convention Area seeking to develop their own domestic fisheries.

PURSE SEINE FISHERY

- 7. Purse seine fishery measures apply to the area of the Convention bounded by 20₀N and 20₀S.
- 8. CCMs shall take necessary measures to ensure that purse seine effort levels do not exceed either 2004 levels, or the average of 2001 to 2004 levels, in waters under their national jurisdiction, beginning in 2006.
- 9. The Commission shall implement compatible measures as required under Article 8 of the Convention, to ensure that purse seine effort levels do not exceed 2004 levels on the high seas in the Convention Area or the total fishing capacity will not increase in the Convention Area.
- 10. (i) For those FFA Member Countries who are Parties to the Nauru Agreement, the provisions of paragraph 8 will be implemented as a Vessel Day Scheme that will limit days fished to a level no greater than 2004 levels and will be fully implemented by 1 December 2007. Until that time, the current measures under the Palau Arrangement shall remain in force.
 - (ii) Other non-PNA member countries shall implement similar measures to limit purse seine effort in waters under their jurisdiction to no greater than 2004 levels, or to the average of 2001 to 2004 levels.

Temporary closures for the purse seine fishery

11. In order to achieve the overall reduction in catch and effort required for bigeye and yellowfin tuna, in accordance with advice and recommendations received from the Scientific Committee, the Executive Director shall work with CCMs during 2006 to develop a proposal for consideration at the Third Session of the Commission that is consistent with the IATTC arrangements that allow for a system of temporary purse seine closures.

Control of sets on FADs for the purse seine fishery

- 12. For the purposes of these measures, the term Fish Aggregation Device (FAD) means any man-made device, or natural floating object, whether anchored or not, that is capable of aggregating fish.
- 13. CCMs shall develop management plans for the use of FADs (anchored and drifting) within waters under national jurisdiction which shall be submitted to the Commission.
- 14. The Commission will work with CCMs to develop methods to reduce catches of juvenile bigeye and yellowfin tuna caught in association with FADs.
- 15. Beginning in 2006, the Scientific Committee and the Technical and Compliance Committee shall undertake to explore and evaluate mitigation measures for juvenile bigeye and yellowfin taken around FADs, in cooperation with other RFMOs, and present the results annually to the Commission. This work shall continue on an annual basis.

Special Provisions for the development of skipjack fisheries

16. Developing skipjack purse seine fisheries, between 20 degrees north and 20 degrees south, that can

provide verifiable evidence of minimal yellowfin and bigeye bycatch, with 100% observer coverage, and with a legitimate development plan, will be exempted. Any such plan shall restrict the use of FADs and implement other such management measures necessary to minimize impacts on bigeye and yellowfin. These measures must be supported by adequate monitoring, control and surveillance to ensure their effective implementation. Existing plans shall be tabled at the Commission for information. Any new plan is to be tabled at the Commission before Government approval. The Commission is to be given the opportunity to comment on the plan before its approval.

LONGLINE FISHERY

Catch limits for the longline fishery

- 17. The catch of bigeye for each CCM for the next 3 years shall not exceed the average annual bigeye catch for the years 2001-2004 or the year 2004^3 .
- 18. Paragraph 17 does not apply to CCMs that caught less than 2,000 tonnes in 2004. Each CCM that caught less than 2,000 tonnes of bigeye in 2004 shall ensure that their catch does not exceed 2,000 tonnes in each of the next 3 years.
- 19. Any future reduction in catch levels shall take into account increases in the levels of such catches by each CCM in recent years.

OTHER FISHERIES

20. The second meeting of the Scientific Committee will review the catch of bigeye and yellowfin in other commercial fisheries in the Convention Area and provide advice to the Commission so that conservation and management measures can be developed.

-

³ The year 2004 shall apply only to China and the United States

A5.2 South Pacific Albacore

CONSERVATION AND MANAGEMENT MEASURE FOR SOUTH PACIFC ALBACORE

Conservation and Management Measure-2005-02

The Commission For The Conservation And Management Of Highly Migrato ry Fish Stocks In The Western And Central Pacific Ocean

In accordance with the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean:

Recalling that the Scientific Committee notes that there are critical biological uncertainties for South Pacific albacore;

Noting that while current catch levels from the South Pacific albacore stock appear to be sustainable, given the age-specific mortality of the longline fleets, any significant increase in effort would reduce CPUE to low levels with only moderate increases in yields. CPUE reductions may be more severe in areas of locally concentrated fishing effort.

Further noting that while future increases in albacore catch are likely to be sustainable, estimates of MSY are highly uncertain because of the extrapolation of catch and effort well beyond any historical levels. Projections demonstrated that longline exploitable biomass, and hence CPUE, would fall sharply if catch and effort were increased to MSY levels. Therefore, the economic consequences of any such increases should be carefully assessed beforehand.

Adopts, in accordance with the Article 10 of the WCPFC Convention that:

- 1. Commission Members, Cooperating Non-Members, and participating Territories (CCMs) shall not increase the number of their fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 20₀S above current (2005) levels or recent historical (2000-2004) levels.
- 2. The provisions of paragraph 1 shall not prejudice the legitimate rights and obligations under international law of small island developing State and Territory CCMs in the Convention Area for whom South Pacific albacore is an important component of the domestic tuna fishery in waters under their national jurisdiction, and who may wish to pursue a responsible level of development of their fisheries for South Pacific albacore.
- 3. CCMs that actively fish for South Pacific albacore in the Convention Area south of the equator shall cooperate to ensure the long-term sustainability and economic viability of the fishery for South Pacific albacore, including cooperation and collaboration on research to reduce uncertainty with regard to the status of this stock.
- 4. This measure will be reviewed in 2006 on the basis of advice from the Scientific Committee on South Pacific albacore.

A5.3 North Pacific albacore

CONSERVATION AND MANAGEMENT MEASURE FOR NORTH PACIFIC ALBACORE

Conservation and Management Measure-2005-03

The Western and Central Pacific Fisheries Commission (WCPFC),

Observing that the best scientific evidence on North Pacific albacore from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean indicates that the species is either fully exploited, or may be experiencing fishing mortality above levels that are sustainable in the long term, and

Recalling further Article 22(4) of the WCPFC Convention that provides for cooperation with the IATTC regarding fish stocks that occur in the Convention Areas of both organizations and

Recognizing that the Inter-American Tropical Tuna Commission (IATTC) adopted, at its 73rd meeting, conservation and management measures on North Pacific albacore;

Adopts, in accordance with the Article 10 of the WCPFC Convention that:

- 1. The total level of fishing effort for North Pacific albacore in the Convention Area north of the equator shall not be increased beyond current levels.
- 2. The Members, Cooperating Non-Members and participating Territories (hereinafter referred to as CCMs) shall take necessary measures to ensure that the level of fishing effort by their vessels fishing for North Pacific albacore in the WCPF Convention Area is not increased beyond current levels;
- 3. All CCMs shall report all catches of North Pacific albacore to the WCPFC every six months, except for small coastal fisheries which shall be reported on an annual basis. Such data shall be reported to the Commission as soon as possible and no later than one year after the end of the period covered.
- 4. All CCMs shall report annually to the WCPFC Commission all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed at albacore. The reports for both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of weight. Fishing effort shall be reported in terms of the most relevant measures for a given gear type, including at a minimum for all gear types, the number of vessel-days fished⁴.
- 5. The Northern Committee shall, in coordination with International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean and other scientific bodies conducting scientific reviews of this stock, including the WCPFC Scientific Committee, monitor the status of North Pacific albacore and report to the Commission on the status of the stock at each annual meeting, and make such recommendations to the Commission as may be necessary for their effective conservation.
- 6. The Commission shall consider future actions with respect to North Pacific albacore based on

⁴The first such report shall be due on April 30th, 2006 and shall cover calendar year 2004. Small Island Developing States will make their best efforts to comply with this first reporting deadline.

recommendations of the Northern Committee.

- 7. The CCMs shall work to maintain, and as necessary reduce, the level of fishing effort on North Pacific albacore within the Convention Area commensurate with the long-term sustainability of the stock.
- 8. The WCPFC Executive Director shall communicate this resolution to the IATTC and request that the two Commissions engage in consultations with a view to reaching agreement on a consistent set of conservation and management measures for North Pacific albacore, and specifically, to propose that both Commissions adopt as soon as practicable uniform conservation and management measures and any reporting or other measures needed to ensure compliance with agreed measures.
- 9. The provisions of paragraph 2 shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the Convention Area whose current fishing activity for North Pacific albacore is limited, but that have a real interest in, and history of, fishing for the species, that may wish to develop their own fisheries for North Pacific albacore in the future.
- 10. The provisions of paragraph 9 shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such small island developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries.

A5.4 Resolution on overcapacity

RESOLUTION ON REDUCTION OF OVERCAPACITY

Resolution-2005-02

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean,

RECALLING the resolutions adopted at the fourth session of the Multilateral High Level Conference (MHLC IV), on 19 February 1999, and the third session of the Preparatory Conference for the Establishment of the Commission for the Conservation and Management of the Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (PrepCon), on 22 November 2002, in which the participants, *inter alia*, urged all States and other entities concerned to exercise reasonable restraint in respect of any regional expansion of fishing effort and capacity,

RECALLING the Resolution adopted at the fifth session of the PrepCon, on 3 October 2003, in which the participants strongly urged states, territories, fishing entities and other entities who have continued to breach these resolutions since the original MHLC IV resolution to reduce any overcapacity they have created, and

Adopts, in accordance with Article 10 of the Convention that:

- 1. Developed Commission Members, Cooperating Non-members and participating Territories (CCMs) whose nationals are beneficial owners of purse seine vessels that entered the WCPFC Convention Area after the MHLC and PrepCon resolutions and other concerned CCMs shall work together to ensure that the beneficial owners reduce by 31 December 2007, such overcapacity as created by hose fishing vessels through reduction of equivalent fishing capacity of other fishing vessels operating in the Convention Area.
- 2. Paragraph 1 above shall be implemented to ensure that no adverse effect is given to the coastal processing and transshipment facilities and associated vessels of developing island coastal states and territories, and would not affect investment that has occurred legally in FFA member countries.
- 3. This resolution applies only to capacity increase in the period 1999 to 2005.