The Palau arrangement

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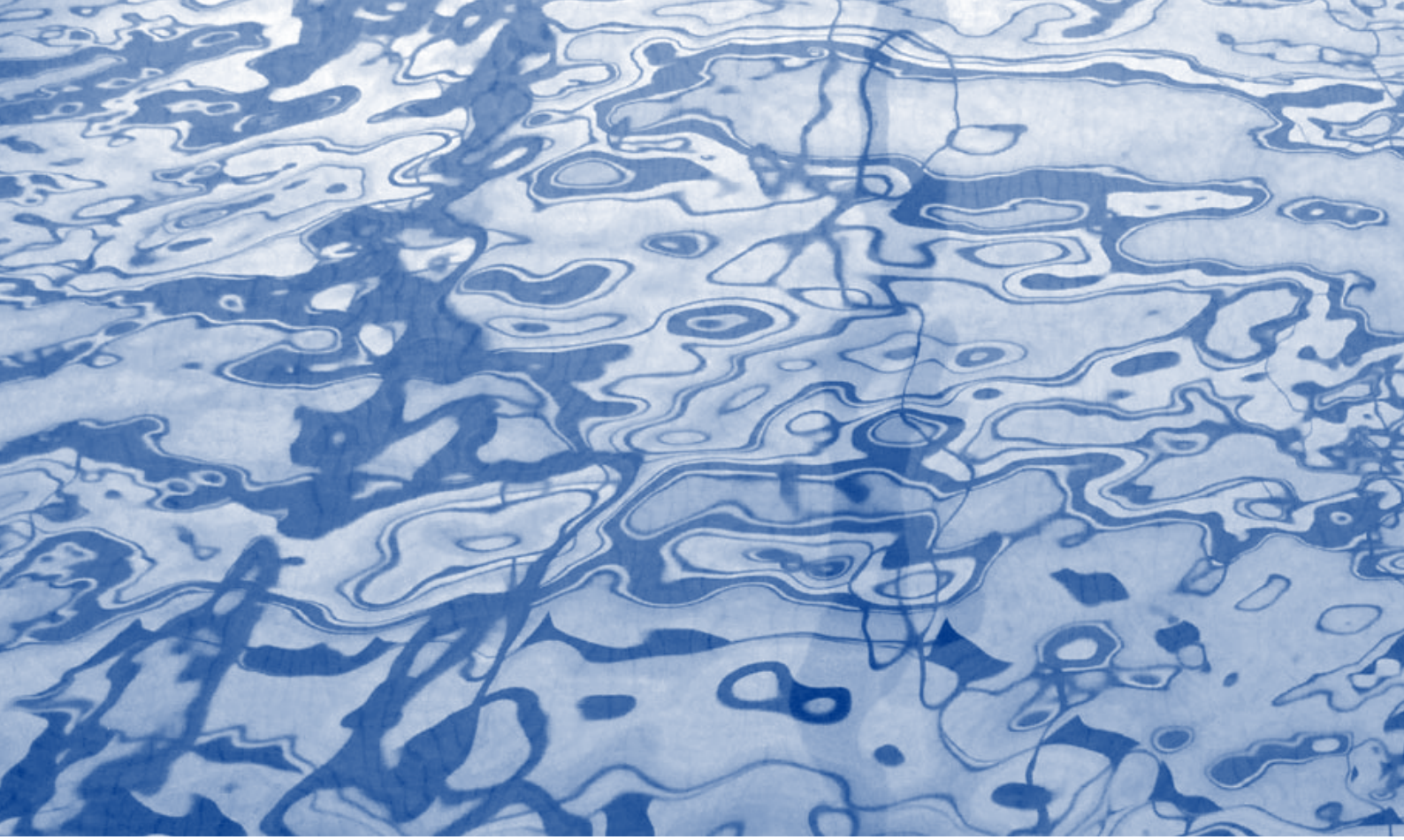

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The Palau arrangement for the management of the western Pacific purse seine fishery - management scheme (Vessel day scheme)

Steve Dunn[1], Len Rodwell[1], Glen Joseph[2]

1 Pacific Islands Forum Fisheries Agency, Honiara, Solomon Islands.
2 Marine Resources Authority, Majuro, Marshall Islands

TABLE OF CONTENTS

Abstract v
Background to the western and central Pacific purse seine fishery vii
The Palau arrangement 1
The vessel day scheme 5
Conclusion 9

Abstract

This paper sets out the history of the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery and details recent management initiatives taken by the parties to enhance the effectiveness of it. The western and central Pacific purse seine fishery is the world largest and most valuable tuna purse seine fishery. The parties to the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery are in the process of introducing a new management scheme in order to ensure the biological sustainability of the exploited tuna stocks and to maximise the economic benefits generated from their exploitation. The current management scheme under the Palau Arrangement is based on restrictions on the total allowable number of vessel licenses available and allocating these licenses among fleets operating in the western and central Pacific purse seine fishery. Under a new management scheme to be introduced a total allowable effort level (in terms of purse seine effort days) will be set and allocated among the Palau Arrangement parties while ensuring that various treaty obligations are met. This new scheme will be one of the most sophisticated management schemes in place in any multi-jurisdictional tuna fishery in the world.

Background to the western and central pacific purse seine fishery

The western and central Pacific purse seine fishery is the largest tuna fishery in the world. Annual catches have been in excess of 1 million tonnes since 1998 with a peak with the 2004 catch of 1.3 million tonnes. Approximately 400 vessels participate in the fishery, but this number includes a large number of vessels from Japan, New Zealand and the Philippines that fish within their own exclusive economic zones (EEZs) that are not covered under the various licensing arrangements with Pacific island members of the Forum Fisheries Agency (FFA). Approximately 200 vessels are covered by such licensing arrangements, the most common form of which is bilateral access arrangements and domestic licences. The exception is the United States fleet which operates under the terms and conditions of a multilateral treaty with FFA members.

THE PALAU ARRANGEMENT

The Palau Arrangement[1] was developed by a sub-regional grouping of FFA members who are parties to the Nauru Agreement (PNA)[2]. The Nauru Agreement is a sub-regional agreement concerned with Cooperation in the Management of Fisheries of Common Interest. This is an alliance of Pacific island states whose exclusive economic zones collectively account for a significant bulk of the region's tuna catch and almost all of the purse seine catch. For the past two decades the PNA have sought to coordinate management measures with a view to enhancing economic benefits from the fishery. Specifically the PNA have strived to harmonize terms and conditions of access for distant water fishing vessels/fleets and to grant preferential access to vessels of the parties in order to encourage domestic participation in the fishing industry. The current PNA members are Federated States of Micronesia (FSM), Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.

The development of the Palau Arrangement by PNA can be traced to concerns in the late 1980s that the western and central Pacific yellowfin stock was becoming over-exploited and that action should be taken to reduce catches[3]. It was argued that reducing the purse seine effort for skipjack tuna would alleviate pressure on the yellowfin and bigeye tuna. The PNA group responded by developing informal arrangements for the management of the purse seine fishery that limited vessel numbers. Through these arrangements the PNA was able to exercise control over the fishery as a whole because of the large share of the catch taken within the EEZs of parties (estimated at approximately 80% for the purse seine fishery) and the pattern of purse seine operations has been such that vessels require access to a number of EEZs

1 See FFA, 1992. *Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery*, Honiara, Forum Fisheries Agency.
2 See FFA, 1982. *Nauru Agreement Concerning Cooperation in the Management of Fisheries of Common Interest*, Honiara, Forum Fisheries Agency.
3 Muller, D.A.P. & Wright, A. 1990. *The Western Pacific Purse Seine Fishery: A Summary of Concerns, FFA Report 90/2.7* Honiara, Forum Fisheries Agency.

at any one time in order to fish effectively. The assumption underpinning the development of the Palau Arrangement was that cutting effort would improve catch rates in the medium and long terms. With increased prices, foreign fishing vessels would be able to meet higher fees. In addition it was thought that the imposition of a limit on vessel numbers would lead to competition for licences amongst vessel operators.

By the ninth annual meeting of the PNA in Nauru in April 1990, a provisional limit had been set of 164 purse seine vessels that could be licensed in the region, with vessel numbers allocated by flag with an additional allocation for domestic and foreign, but locally based vessels. This number was progressively increased at annual PNA meetings, mainly as a reaction to increasing demand for licences to be issued by the parties, particularly to the Taiwanese and Korean fleets. The current vessel capacity level of 205 was reached at the twelfth annual meeting of the PNA in Palau in April 1993 and has not been exceeded to date.

To give this fleet size some context, the majority of the purse seine fleet is between 50 and 80 metres long, and 1,200 and 2,000 tonnes, with the largest vessel approximately 90 metres in length and 2,400 gross tonnes[4].
The Palau Arrangement was signed in October 1992 by Federated States of Micronesia, Marshall Islands, Nauru, Palau and Tuvalu. Kiribati and Papua New Guinea signed the following year. The arrangement entered into force in November 1995 following the deposit of the instrument of ratification of Papua New Guinea. All PNA members with the exception of Tuvalu are parties to the Palau Arrangement. Tuvalu has signed, but not ratified the arrangement and has therefore agreed not take action that might undermine it. The Palau Arrangement applies within the "Purse Seine Fisheries Management Area" defined as the EEZ or fisheries zones of the parties including the adjacent high seas in the Western Pacific Ocean where purse seine vessels operate.

The Palau Arrangement received little support from distant water fishing nations (DWFN), particularly Japan, as these nations had no say in the decision making process. However, the importance of access to the EEZs of the parties to the Palau Arrangement in the purse seine fishery meant that the scheme could be effectively implemented.

The PNA and the parties to the Palau Arrangement have met annually to review vessel numbers. In addition to the revisions that saw the limit rise from 164 vessels to 205 vessels, a major change was made at the 13th annual meeting of PNA in Honiara in April 1994. At that meeting it was agreed to substantially revise Annex 1[5] to reduce by 10% the number of bilateral

4 See FFA, 2006. *FFA Vessel Register*, Honiara, Forum Fisheries Agency.
5 Annex 1 to the Palau Arrangement sets out the purse seine vessel allocations by flag state.

licences available to each DWFN and to increase the number of licences assigned to the "domestic/locally based" category by an equivalent amount. These changes became effective in April 1997, allowing DWFNs adequate time to adjust their fleet operations. The reduction in bilateral licences was aimed at promoting domestic industry development by encouraging DWFN operators to base their vessels locally in the region on the premise that such vessels provide greater economic benefits than bilateral access vessels, as well as encouraging onshore investment in the tuna industry. This initiative was taken in conjunction with the implementation of the FSM Arrangement for Regional Fisheries Access that provided preferential licensing conditions for domestic and locally based vessels meeting specified criteria.

The other significant change was the introduction of vessels from the European Union, initially as Spanish flag vessels at the fifth annual meeting of the Parties to the Palau Arrangement held in May 2000. Provision was made for new entrants by utilising vessel numbers notionally allocated to United States flag vessels that were not being utilised under the Multilateral Treaty on Fisheries[6]. There has been a steady decline in the participation of United States flag vessels since 1991, from a peak of 50 to a current level of 13. The parties recognised the complex issues surrounding such a policy, mainly regarding the potential for increasing capacity in the fishery. They agreed that no new purse seine vessels would be licensed prior to parties having the opportunity to consider a review of the Palau Arrangement which had commenced in April 2000.

The parties were keen to move away from the current structure of the Palau Arrangement for a range of reasons. The arrangement locks in vessel limits by specific fleets, thereby making it difficult to change these levels, introduce new fleets, or give preference to certain types of vessels, particularly domestic and foreign locally based vessels. The fact that in the 10 year life of the arrangement the only new entrants were the Spanish purse seine fleet is testimony to the difficulty of introducing new entrants. This restriction also meant that it was difficult for the parties to introduce mechanisms to maximise access fees because of the entrenched position of the existing operators. There was also a need for a more effective measure to limit fishing mortality in the light of stock assessment warning signals related to bigeye as well as yellowfin[7].
This is becoming a critical issue given that recent stock assessments for both bigeye and yellowfin indicate overfishing of bigeye and yellowfin stocks[8] and have led to the Western and Central Pacific Fisheries Commission

6 See FFA, 1987. *Treaty on Fisheries between Governments of Certain Pacific Island States and the Government of the United States of America*, Honiara, Forum Fisheries Agency.
7 Langley, A., Hampton, J. & Willliams, P. 2004. *The Western and Central Pacific tuna fishery: 2002: overview and status of stocks. Tuna Fisheries Assessment Report 5*. Noumea, Secretariat of the Pacific Community.
8 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.

(WCPFC)[9] adopting a resolution on conservation and management for these key species. Finally, parties were concerned that allocations by fleet could undermine the position of parties and other FFA members in future debate on tuna allocation which will be held at the WCPFC level. This is because the current structure of the Palau Arrangement effectively allocates by flag state whereas the preferred position of FFA members is to seek a zonal allocation model recognizing their ownership of the resource whilst it is within the limits of their exclusive economic zones. Such a policy places coastal states in a significantly stronger position in terms of controlling fishery access, maximizing economic benefits and the potential to develop domestically based fleets. It should be noted that the WCPFC has yet to discuss tuna resource allocation. The second session of the WCPFC tasked their secretariat to produce a discussion paper on allocation issues in advance of the 3rd session to be held at Apia, Samoa in December 2006.

Given the issues and concerns expressed leading up to 2000 the parties agreed that it was an appropriate time to review the Palau Arrangement. The first stage of the review was a consultancy undertaken by Gerry Geen and completed for parties in September 2000[10]. A key recommendation of the report was that parties introduce a sub-regional limit on the number of purse seine days. This recommendation provided the basis of the decision by the parties to adopt an alternative form of effort control for the purse seine fishery by establishing a limit on vessel days rather than vessel numbers. The vessel day scheme itself has then been developed by the parties with technical assistance provided by the FFA secretariat. It is anticipated that the scheme will be formally adopted by the parties at their eleventh annual meeting in May 2006 for immediate implementation.

9 The Western and Central Pacific Fisheries Commission adopted a conervation and management resolution at their 2nd session at Pohnpei in December 2005 that effectively caps the number of purse seine fishing days at a maximum of 2004 levels (www.wcpfc.org)

10 Geen, G. 2000. *Review of the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery,* FFA unpublished report, Honiara, Forum Fisheries Agency.

The vessel day scheme

The rationale for the vessel day scheme supports both biological and economic goals. From the biological perspective it aims to enhance the sustainability of the western and central Pacific purse seine fishery by controlling the level of fishing effort by purse seine vessels within limits consistent with resource sustainability. From the economic perspective it aims to increase economic benefits to resource-owning states by creating a real limit on fishing days that will create a demand from vessel operators for these days. It is anticipated that participating vessel owners will also benefit as the less efficient vessels will be removed from the fishery thereby making it more profitable for those remaining. An additional benefit of the scheme for the parties is that it is a zonal allocation with days allocated to the parties to the Palau Arrangement rather than to the flag state.

The arrangement operates by establishing an overall limit on the number of days that can be fished by purse seine vessels operating in the EEZs of the parties to the Palau Arrangement. The limit is based on the historical level of days fished in the EEZs of parties based on data provided by the Oceanic Fisheries Programme of the Secretariat of the Pacific Community. The only exceptions to this are vessels operating under the two multilateral access arrangements in place in the region, the Multilateral Treaty on Fisheries with the United States (UST), currently covering 13 vessels and the FSM Arrangement (FSMA) for Regional Fisheries Access, covering approximately 30 vessels. A pool of vessel days based on historical effort is deducted from the overall limit to take account of these vessels.

The total allowable effort (TAE) is set each year by the parties at a special meeting convened for that purpose. The parties have agreed to be bound by 2004 effort levels but will take into account other factors when finalising the TAE with a particular focus on fishery development. Because bigeye and yellowfin tuna are considered to be the subject of overfishing, and proposed increase in purse seining to target skipjack tuna must address the issue of big

eye and yellowfin by-catch. The TAE is then allocated amongst the parties to the Palau Arrangement after the deduction of UST and FSMA days.

A key issue for the parties to resolve was the criteria on which the allocation between parties was to be based. The approach adopted was to use equal weighting between the historic level of effort in zone and the level of estimated biomass in each zone each year. This approach recognises that while the historical level of effort is an important determining factor, account needs to be taken of the potential productivity of EEZs, particularly where some parties to the Palau Arrangement may have restricted effort in their EEZs for reasons such as to encourage the operation of domestic purse seine operations, or where there had been a more cautious approach to licensing. Once allocated the parties are free to utilise their allocated days as they see fit. This provides the flexibility to provide for new entrants that may offer higher fees than the existing fleets and for parties to give preference to their domestic fleets should they wish to do so. Parties will be under an obligation to ensure that their total number of fishing days will not exceed their annual allocation of fishing days. Subject to this requirement, each party will have full discretion as to how it employs its allocated fishing days, including full discretion as to which purse seine vessels are licensed to undertake fishing activities.

The high level administration of the scheme will be undertaken by the Secretariat to the Pacific Islands Forum Fisheries Agency (FFA) from its Honiara headquarters. This service will include monitoring of fishing days through the FFA regional vessel monitoring system and the preparation of activity reports for the annual meeting of the parties. Compliance is the responsibility of the parties.

It was recognised that a scheme was required to take account of size variations of purse seine vessels. This was considered important as some parties are licensing smaller sized domestic vessels and there was also a need to ensure that the impact of new large vessels was effectively accounted for. The overall size range for vessels in the purse seine fishery ranges from slightly less than 50 metres to vessels over 80 metres in length. The bulk of the fleet is concentrated in the 50 to 80 metre size range. An analysis of catch rates was undertaken by SPC and the basis of the outcome of that analysis it was decided that for small vessels of less than 50 metres in length a day of fishing would only be counted as half a day under the scheme while for vessels of greater than 80 metres in length, a day of fishing would be counted as one and a half days. For vessels in the 50 to 80 metre range a day is equal to a day.

Parties will have flexibility to carry over unused fishing days to future years, to borrow fishing days from future years, and to transfer fishing days between themselves on whatever terms they mutually agree. This flexibility is

necessary to take account of the migratory nature of tuna stocks and the fact that oceanographic conditions (the El Nino and La Nina cycles) influence the distribution of stocks across the western and central Pacific.

The scheme is run on a three year rolling basis. At each anniversary of the commencement of the scheme the TAE is set for the new third year. Balances are rolled into the new three year period and parties can utilise those balances as they see fit.

The vessel day scheme is complex and its introduction and implementation will take some time. Not only will existing access arrangements in the region need to be modified, but licensing systems at the national level will also need to be modified. The parties have acknowledged this by agreeing to a transitional period during which the existing Palau Arrangement vessel capacity limit will operate side by side with the vessel day scheme, during which time all necessary arrangements to have the scheme fully operational will be carried out. This is acknowledged in the commission resolution on conservation and management measures for bigeye and yellowfin which explicitly states that the vessel days scheme will be fully implemented by 1 December 2007 and up until that time the existing restrictions under the Palau Arrangement will remain in place.

Conclusion

The vessel day scheme under the Palau Arrangement is a critical step forward in management for the western and central Pacific tuna fishery. The move to modify the Palau Arrangement will make the management of the purse seine fishery more effective, and represents the first allocation exercise undertaken by the parties. The scheme might therefore serve as a useful example when the commission moves to consider allocation for the overall tuna fishery, and will ensure parties lead the debate on sustainable management.