Exclusive economic zones

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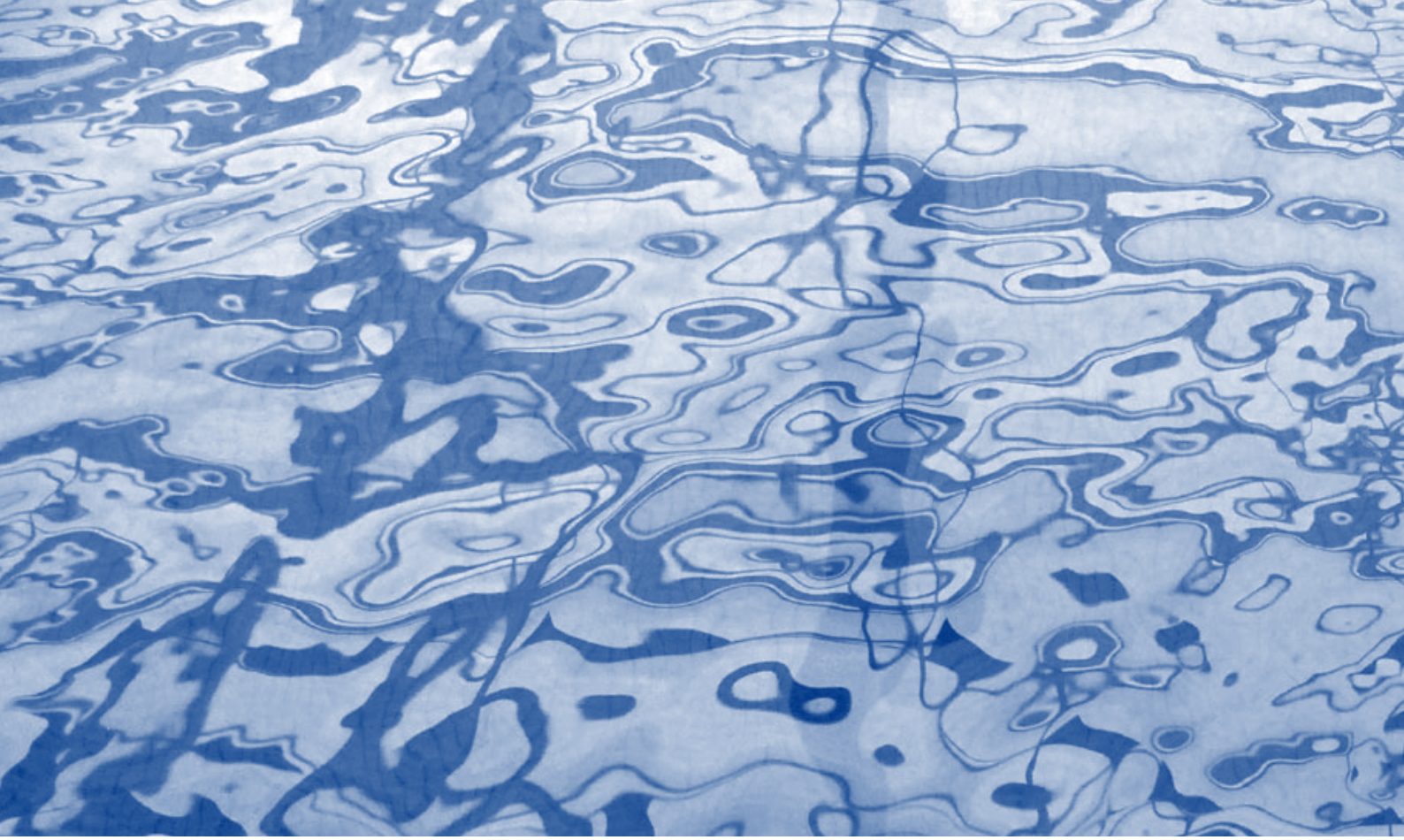

Exclusive economic zones

Exclusive economic zones, distant water fishing nations and Pacific small island developing states: who really gets all the fish?

Quentin Hanich and Martin Tsamenyi, Australian National Centre for Ocean Resources and Security, University of Wollongong, Wollongong, New South Wales 2522 Australia, hanich@uow.edu.au; tsamenyi@uow.edu.au

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Abstract

The declaration of exclusive economic zones (EEZs) was the most significant reallocation of fisheries property rights of the 20th Century and resulted in the transfer of property rights for 90% of the world's then active fisheries to coastal states, many of whom were developing island states. The philosophical basis of the EEZ regime, as a mechanism to achieve a new international economic order for developing coastal states, has failed to deliver real change for a number of reasons. Using the experiences of Pacific small islands developing states in the Western and Central Pacific Ocean as a case study, this paper shows that the declarations of EEZs by these states has not matched the original economic expectations. The paper discusses some of these reasons in the context of Pacific small island developing states and discusses opportunities to achieve the original intentions behind the EEZ concept.

Introduction

The declaration of exclusive economic zones as a result of the 1982 United Nations Convention on the Law of the Sea (LOSC), was the most significant reallocation of fisheries property rights of the 20th Century. The EEZ regime resulted in the transfer of property rights for 90% of the world's then active fisheries. These property rights were transferred from the international commons ('freedom of the seas'),[1] to coastal states, many of whom were developing island states.

The philosophical basis of the EEZ regime, as a mechanism to achieve a new international economic order for developing coastal states, has failed to deliver the expected changes for many, if not most, developing coastal states. Using the experiences of Pacific small island developing states as a case study, this paper shows that the declarations of EEZs by these states has not matched the original economic expectations. The paper provides reasons to show why this is the case and discusses opportunities to achieve the original intentions behind the EEZ concept.

1 Grotius, Hugo. 1916. *The freedom of the seas*. Oxford University Press. New York. Grotius wrote the 'Freedom of the seas' in 1604-5. The 1916 publication cited is a translation of the Latin text. Grotius argued that the oceans were the common property of all, particularly in regard to freedom of navigation and trade. This countered sovereign claims by Spain over the Pacific Ocean and the Gulf of Mexico, and by Portugal over the Indian Ocean.

The exclusive economic zone concept

The traditional legal framework for the exploitation of marine living resources was based on the principle of freedom of access. Under this regime, oceans were divided into two distinct zones: the territorial seas, and the high seas. The territorial sea, which in most cases was three nautical miles in breadth, constituted the limit of coastal states fisheries special rights. Beyond three nautical miles, the high seas were free to any and all. The freedom of fishing concept had two implications for the regulation of fisheries. First, coastal states as such did not have any special rights to the fisheries resources of the oceans beyond the narrow limit of the territorial sea. Second, the concept undermined effective conservation of the living resources of the oceans through its inherent tendency to create a 'tragedy of the commons'.[2]

This legal framework changed in the 1970s as the Third Law of the Sea Conference (UNCLOS III) negotiated a comprehensive multilateral treaty to regulate the use of the seas.[3] This process, and the state practices generated by it, resulted in the development, amongst other things, of the exclusive economic zone (EEZ) concept. In regard to most marine fisheries, the EEZ regime[4] displaced the old doctrine of high seas freedoms and brought under national jurisdiction large tracts of ocean space that previously belonged to the regime of the high seas:

> 'Under the new regime of the seas, the world community has willed to the coastal states the bulk of living resources in waters off their shores.'[5]

2 Hardin, G. 1968. The tragedy of the commons. *Science* 162: 1243-1248.
3 The 1982 Law of the Sea Convention, hereafter LOSC, text to be found at 21 *ILM* (1982) pp. 1261-1354.
4 See Part V, LOSC
5 FAO. Methodology and guidelines for fisheries development planning: with special reference to the developing countries in the African region. FAO Fisheries Technical Paper No. 297.

However, this inheritance came with strings attached. The LOSC describes the expectations placed on coastal states by the world community in regard to their EEZ. The expectations are couched in terms of three important obligations: conservation; optimum utilization; and a duty to co-operate.

Firstly, article 61 requires coastal states to manage and conserve fisheries within their EEZs. They are required to determine the allowable catch of the living resources in their EEZ and to ensure, through 'proper' conservation and management measures, that living resources within the EEZ are not over-exploited.[6]

Secondly, article 62 obliges coastal states to share their surplus fish and promote the objective of optimum utilisation of living resources within their EEZ (without prejudice to the conservation requirements described in article 61). This reflected the concerns of distant water fishing nations (DWFNs) that coastal states would drastically limit utilisation of living resources within their EEZs. Recognising that many developing states did not have the capacity to 'optimally harvest' their EEZs, coastal states are obliged to calculate their capacity to harvest the entire allowable catch of their EEZ and are obliged to give other states access to any surplus beyond which their fleets could harvest. However, the LOSC did give coastal states wide discretion in determining this surplus and the conditions for foreign access.[7]

Thirdly, articles 63 and 64 oblige coastal states and DWFNs to cooperate in regard to straddling and migratory fish stocks[8] that occur within their EEZ, or whose vessels fish for the same stocks on the high seas. These states shall cooperate, either directly, or through fora such as regional fisheries management organisations, and ensure the conservation and optimum utilisation of same stocks throughout their range.[9]

6 Further, article 61 also states that any such measures should be based on the best available scientific advice and be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield. However, of particular relevance to Pacific island states, article 61 gives coastal states wide flexibility to determine these measures and allows that they may be qualified by environment and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing states.

7 Article 62.3: In giving access to other states to its exclusive economic zone under this article, the coastal state shall take into account all relevant factors, including, *inter alia*, the significance of the living resources of the area to the economy of the coastal state concerned and its other national interests, the provisions of articles 69 (rights of landlocked states) and 70 (rights of geographically disadvantaged states), the requirements of developing states in the subregion or region in harvesting part of the surplus and the need to minimize economic dislocation in states whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks.

8 Straddling and highly migratory stocks may simultaneously straddle waters both within and beyond the EEZ, or may migrate back and forth across EEZ boundaries. Consequently, catches of these stocks on either side of an EEZ will affect the same stock with direct impacts on both coastal fishing fleets and high seas fishing fleets.

9 Article 64 also requires states to cooperate, in regions were there is no appropriate organisation, to establish such an organisation (i.e RFMO) and participate in its operation.

It was assumed that the granting of sovereign rights to coastal states over their EEZs would significantly benefit coastal states, at some cost to DWFNs who previously had fished these stocks (either through displaced effort or requirement to pay access fees). However in practice, DWFNs still control the key aspects of the global fisheries trade: technology; finance; trade (including access to the most lucrative markets); and production of the final end uses. DWFN continue to maximise and maintain their control inherent in their positioning at the end of the production cycle.[10]

10 Stokke, O.S. 1991. Transnational fishing: Japan's changing strategy. *Marine Policy* 15: 231-243.

Western and central pacific tuna fisheries

DWFNs continued to dominate many EEZ fisheries. This is starkly illustrated in the Western and Central Pacific (WCPO) tuna fisheries where DWFNs continue to catch up to 90%[11] of the regional tuna resources, despite 41%[12] of the catch originating from the EEZs of the region's small island developing states.[13]

The WCPO is home to the world's richest and largest tuna fishery[14] which migrates across, and straddles, both high seas and EEZs. This tuna fishery is different from tuna fisheries in the Atlantic, Indian and Eastern Pacific Oceans in that more than half of the region occurs within EEZs, thereby granting coastal states sovereign rights over the majority of the fishery. The combined EEZs of the Pacific island states cover roughly 30,569,000 km², equivalent to about 28% of all EEZs globally.[15]

In 2004, the WCPO purse seine, pole and line, longline, and troll tuna fisheries (plus some limited artisanal fishing in Indonesia and the Philippines) caught an estimated 2,021,773 tonnes[16] of tuna with an estimated delivered

11 Tarte, S. 1999. Negotiating a tuna management regime for the Western and Central Pacific: The MHLC process 1994-1999. *The Journal of Pacific History* 34: 273-280.
12 Hampton, J. 2005. *Tuna fisheries and their impacts in the Western and Central Pacific Ocean*. Secretariat of the Pacific Community. http://www.spc.org.nc/artImpact%20of%20tuna%20fisheries.htm
13 Within the context of this article, 'Pacific island states' refers to independent members of the Forum Fisheries Agency (except for Australia and New Zealand): Cook Islands, Federated states of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.
14 The WCPO tuna fishery in 2004 was 51% of the global tuna catch of just under 4 million tonnes. *Report of the First Regular Session of the Scientific Committee.* 2005. WCPFC.
15 Gillet, R. 2005. Pacific Island Countries Region. In *Review of the state of world marine resources*. FAO Fisheries Technical Paper 457. Rome. FAO. Pp144—157.
16 *Report of the First Regular Session of the Scientific Committee.* 2005. WCPFC.

value of more than US$2.5 billion.[17] The two key fisheries are purse seine and longline.[18]

Over-capacity within the WCPO tuna fisheries is a growing concern as it is undermining the long-term sustainability of some aspects of the fishery. In 2004, there were over 6,061 vessels actively fishing within the Western and Central Pacific Fisheries Commission (WCPFC) statistical area: including 4,365 longliners; 1,297 pole and liners; and 399 purse seiners.[19]

Some fishing practices, such as fish aggregating devices and purse seine catches of juvenile yellowfin and bigeye, are impacting upon fish stocks and undermining the profitability of the fishery. Economic studies have also shown that fishing effort is significantly above optimal levels, thereby reducing the profitability of the fishery.[20]

Overfishing is likely to be occurring for both yellowfin and bigeye, though neither stock is currently overfished.[21] The scientific committee of the newly formed WCPFC [22] recommended in August 2005 that fishing mortality for bigeye and yellowfin be reduced by roughly 20%. In December 2005, the

17 Estimate does not include the additional value of the troll or artisanal gears fisheries which made up 11% of all catches. Estimates sourced from the *Report of the First Regular Session of Scientific Committee.* 2005. WCPFC.

18 The purse seine fishery is most significant in terms of tonnage: 1,263,161 tonnes or 62% of the total 2004 WCPO tuna catch. This was worth an estimated US$1,158,000,000 (delivered value). Purse seine vessels target skipjack (1,059,061 tonnes or 84% of catch) and yellowfin (179,310 tonnes or 14% of catch) for canning but also record an important by-catch of bigeye (24,790 tonnes or 2% of catch). Longline fishery is far smaller in terms of tonnage, but is almost equal in value due to the higher value of product. 2004 longline catch was 225,786 tonnes or 11% of the total WCPO tuna catch and was worth an estimated US$1,059,000,000 (delivered value). Longliners target bigeye (84,394 tonnes) and high quality yellowfin (70,757 tonnes) for sashimi. The albacore longline fishery catches 65,865 tonnes which are sold as premium 'white meat' canned product. The domestic fisheries of Philippines, Indonesia and Vietnam also take large catches of skipjack, yellowfin and bigeye with high proportions of juvenile tuna. Data is sourced from the *Report of the First Regular Session of the Scientific Committee.* 2005. WCPFC. And: Hampton, J. 2005. *Tuna fisheries and their impacts in the Western and Central Pacific Ocean*. Secretariat of the Pacific Community. http://www.spc.org.nc/artImpact%20of%20tuna%20fisheries.htm

19 Analysis of 2004 WCPFC Tuna Fishery Yearbook reveals 6,061 vessels fishing in the WCPFC statistical area: 4,365 longliners, 1,297 pole and liners and 399 purse seiners. Data on trollers was unavailable. Of these vessels: 65% (3958) were flagged to the key distant water fishing states: China, Japan, Korea, Spain, Chinese Taipei and the USA; 6% (370) were from Pacific small island states developing states: Cook Islands , Federated states of Micronesia, Fiji, Kiribati, Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu; and, 29% (1737) were from Australia, NZ, Indonesia, Philippines, American Samoa and the French territories of French Polynesia and New Caledonia. Reference is Lawson, Timothy (ed) 2004. *Western and Central Pacific Fisheries Commission Tuna Fishery Yearbook 2004*. Secretariat of the Pacific Community. Noumea.

20 Bertignac, M., Campbell, H., Hampton, J., & Hand, A. 2001. Maximising resource rent from the Western and Central Pacific Tuna Fisheries. *Marine Resource Economics* 15: 151-177.

21 *Report of the First Regular Session of the Scientific Committee.* 2005. WCPFC.

22 Negotiations for the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) were completed in 2000 with the convention entering into force in July 2004. Objective of WCPFC is '... to ensure, through effective management, the long term conservation and sustainable use of straddling and highly migratory fish stocks in the Western and Central Pacific Ocean in accordance with the 1982 Convention on the Law of the Sea and the United Nations Fish Stocks Agreement.' The Convention established an annual commission, and a secretariat headquartered in FSM.

WCPFC agreed to restrain purse seine efforts to 2004 levels (highest on record), or the average of 2001-2004 levels, and to restrain longline catches to 2004 levels, or the average of 2001-2004 levels.[23] The WCPFC also agreed to look at measures in 2006 to further reduce catch and effort.

23 Western and Central Pacific Fisheries Commission. 2005. *Conservation and management measures for bigeye and yellowfin in the Western and Central Pacific Ocean*. Conservation and Management Measure 2005-03.

Pacific islands, the EEZ and tuna fisheries

Tuna fisheries have long been viewed as the primary development opportunity for many Pacific island developing states. These island states are some of the poorest and smallest states in the world. For some, their EEZ tuna resources are their only significant resource and are vital to their national well being. Pacific island states depend upon these stocks: as a traditional and important source of food; as a critical form of revenue (US$60-70 million in access fees); employment (25,000 regional jobs); and income (expenditure by locally based vessels is worth US$130 million)[24].

In 1999 the combined annual tuna catch was equivalent in value to approximately 11% of the combined GDP of FFA member Pacific island states [25] while revenue from tuna can contribute up to 42% of gross domestic product[26] (Kiribati and Tuvalu). The access fees from these fisheries are significant components of national economies for 7 of the 14 Pacific island states.[27]

> 'These tuna resources of the area are enormous in relation to the national economies (of the Pacific small island developing states). A purse seine vessel, in a single haul can capture enough tuna to match the value of a year's exports from one of the smaller countries.'[28]

A key issue for the management and exploitation of their EEZs is the inherent migratory nature of tuna and their strong spatial and temporal variability due to their close association with the El Nino Southern Oscillation (ENSO) Index.[29] ENSO events shift the Pacific equatorial warm pool back and forth

24 Gillett, R., McCoy, M., Rodwell, L. & Tamate, J. 2001. *Tuna. A key economic resource in the Pacific island countries.* Report prepared for the Asian Development Bank and the Forum Fisheries Agency.
25 Gillett, R., McCoy, M., Rodwell, L. & Tamate, J. 2001.
26 Gillet, R. & Lightfoot, C. 2001. *The contribution of fisheries to the economies of Pacific island countries*. Report prepared for Asian Development Bank, Forum Fisheries Agency and World Bank.
27 Gillet, R. and Lightfoot, C. 2001.
28 Gillett, R., McCoy, M., Rodwell, L. & Tamate, J. 2001.
29 Cartwright, I. & Willock, A. 1999. Oceana's birthwright; the role of rights-based management in

(east-west) across EEZs and high seas. As the warm pool moves, so too do the associated tuna stocks, and the fishing fleets.[30] This directly impacts upon the revenue that island states can raise from fishing within their EEZs as it increases or decreases their catch rates, and the consequent value of access fees and domestic fisheries, depending upon whether ENSO favours their specific EEZ or not.

tuna fisheries of the Western and Central Pacific. Paper presented to the FishRights 99 Conference, Perth. Australia. 11-19 November, 1999.

30 Lehodey, P., Bertignac, M., Hampton, J., Lewis, A. & Picaut, J. El Nino Southern Oscillation and tuna in the Western Pacific. *Nature* 389.

Who gets what?

There is no doubt that EEZs have brought Pacific island states some benefits and increased economic opportunities. Access fees deliver needed financial contributions to governments, while domestically based fishing fleets and support industries.

pump hard currency into national economies. The EEZs have also become an important motivation for DWFNs to donate foreign aid into the Pacific. For example, fisheries access was the original motivation for one of the region's largest donors, Japan, and continues to be a major factor driving its Pacific aid policies.[31] In 1998-99, Japan donated approximately US$152.7 million of bi-lateral aid to the region.[32]

However, despite the island states holding sovereign rights to much of the fishing grounds, 90%[33] of tuna from EEZs continues to be caught by DWFNs. Their vessels operate through access agreements and other arrangements that historically have returned more economic benefits to the DWFN vessels than the island states.[34] By all measures, island states struggle to earn a reasonable return from their EEZs:

- Approximately 10% or less of catch[35] is taken by vessels from Pacific island states, despite roughly 41%[36] of the catch coming from their EEZs.

31 Tarte, S. 1997. Diplomatic strategies: The Pacific islands and Japan. *Pacific Economic Paper No. 269*. Australia-Japan Research Centre.
32 Petersen, E. 2003. The catch in trading fishing access for foreign aid. *Marine Policy* 27: 219-228.
33 Cartwright, I. and Willock, A. 1999.
34 Gillet, Robert. 2005.
35 90% is taken by DWFN leaving 10% or less for Pacific island states. Tarte, S. 1999.
36 Hampton, J. 2005.

- Approximately 6% of fishing vessels active in the region are flagged[37] to Pacific island states (this includes the controversial Taiwanese owned vessels flagged to Vanuatu, Marshall Islands and Papua New Guinea).[38]
- Approximately 3.5 - 6% (roughly $60-70 million) of the delivered value of the catch is returned to Pacific island states through access fees. [39] This is low in context of other access arrangements reported elsewhere.[40]

While DWFN have won the lion's share of the benefits, Pacific island states bear the costs of managing the tuna fisheries, either directly or through the use of aid donor funds which could have been spent on other projects of benefit to island states.[41] This is a heavy burden for small governments with little capacity and minimal finances.[42]

37 Whether these vessels are in fact 'beneficially owned' by citizens or companies from Pacific island states is another question. It is quite possible that many of these vessels are in fact owned by DWFN interests operating through locally based companies in Pacific island states or through joint ventures.

38 Analysis of Lawson, T. (ed) 2004.

39 These figures are difficult to verify due to confidentiality requirements and varying methods of revenue recognition. Further, the figure may not reflect the associated aid arrangements that often accompany the fee. The figures quoted comes from: Bertignac, M., Campbell, H., Hampton, J. & Hand, A. 2001. And Lewis, T. 2004. *A review of current access arrangements in Pacific developing member countries (PDMCs)*. Another important source on access fees is Gillet, R. & Lightfoot, C. 2001.

40 Petersen, Eh. 2003.

41 *Pacific Islands Oceanic Fisheries Management Project*. 2004. United Nations Development Programme and Forum Fisheries Agency. Honiara.

42 The Forum Fisheries Agency (FFA) was established in 1979 in Honiara, to assist Pacific island states to manage their fishery resources within their EEZs. The FFA has established regional monitoring, control and surveillance measures such as its vessel monitoring system as part of this program. The FFA comprises 17 member governments: Australia, Cook Islands, Federated states of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

Why EEZs have failed to deliver

There are some critical reasons that prevent Pacific island states from benefiting fully from the tuna fisheries within their EEZs. These include:

Lack of basic agreement on the rules of EEZs

Deep divisions between DWFNs and coastal states were exposed during the UNCLOS negotiations regarding the management and allocation of fishing rights within EEZs. These divisions have never been effectively resolved and have carried through into negotiations of other important fisheries fora such as the United Nations Fish Stocks Agreement[43] and the Western and Central Pacific Fisheries Convention.[44]

DWFN argue that tuna are migratory and therefore management should be applied throughout their range – whether EEZ or high seas. Additionally, they argue that allocations should be calculated on fishing history and attributed to the relevant flag state, regardless of where these catches occurred. They refer to the freedom of the seas principle and the primacy of the flag state within the LOSC.

Coastal states argue that they hold sovereign rights over fish stocks within their EEZs, and that these sovereign rights exist regardless of whether the fish stocks are migratory or discrete. Coastal states retain their Law of the Sea right to manage stocks within their EEZs, and argue that allocations should be attributed to the zone where the catch was taken, regardless of whether the catch was taken by foreign flagged vessels or domestic vessels.

43 Full title is 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 Stocks and Highly Migratory Fish Stocks.
44 Full title is Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

The issue is further complicated by equity and power imbalances inherent in resource disputes between developing and developed states. In this instance, the developed DWFNs with their capital, technology and access to wealthy markets, have historically caught most fish. Developing states, often ex-colonies with previous experience of losing resources to foreign capitals, have little fishing history and struggle to build history due to limited capital, technology and access to key markets.

Ongoing tension over rights to manage and exploit migratory stocks within EEZs undermines cooperation. This is evident in DWFN efforts to undermine coastal state management of EEZs and their history of opposition to the introduction of monitoring, control and surveillance measures, for DWFN vessels.[45] This also promotes antagonism between DWFN and coastal states.

The unequal bi-lateral power relationships between DWFN and island states undermine regional attempts to bolster management as DWFN successfully pressure individual island states to not impose regionally agreed measures, such as minimum terms and conditions, as conditions of access on DWFN vessels.[46] In the 1980s these tensions also resulted in open illegal fishing by DWFNs.[47]

Perhaps of most concern, the dispute continues within the WCPFC. Negotiations for the WCPFC were unable to find agreement on how to address the management and allocation of stocks across EEZs and the high seas, so the convention was intentionally left ambiguous to enable both interpretations to be supported.[48] This effectively left the question unresolved and will likely stall progress within the WCPFC until agreement can be reached.

Lack of balance in negotiations of access fees

The superior negotiating position of DWFNs[49] combined with a reluctance to collaborate on access fee negotiations (and a lack of transparency) frustrates

45 Tarte, S. 1999.
46 Tarte, S. 1999.
47 During the 1980s, the USA refused to recognise Pacific island states jurisdiction over migratory tuna stocks within their EEZs. The USA argued that as the Pacific island states were not willing to negotiate management of tuna within their EEZs (a contentious interpretation of article 64 of the LOSC), the USA was not required to respect their claims. This position was later reversed in the late 1980s when 'strategic interests' caused the USA to review its opposition to EEZ rights over migratory fish stocks and to negotiate a multi-lateral treaty with Pacific island states that significantly benefited Pacific Island states through generous access fees and granted EEZ access to USA tuna fishers.
48 Aqorau, T. 2001. Tuna fisheries management in the Western and Central Pacific Ocean: A critical analysis of the Convention for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean and its implications for the Pacific Island states. *The International Journal of Marine and Coastal Law* 16: 379-431.
49 Pretes, M. & Petersen, E. 2004. Rethinking fisheries policy in the Pacific. *Marine Policy* 28: 297-309.

attempts to increase the return from access fees. This is exacerbated by the massive capacity and power imbalances between negotiating delegations.

Tied aid

The issue is further complicated by the often strong ties between access fees and foreign aid. Some economists argue that the amount of foreign aid received in exchange for cheap fishing access is not worth the aid dependency that has developed. They propose that if attention were focused on increasing access fees, rather than tied aid packages, access fees could potentially equal or exceed the current aid and access package.[50] This could also have positive governance and infrastructure benefits given the extensive history of failed aid projects.[51] Some economists also argue that access fees are low when compared with access fees paid elsewhere.[52]

Lack of economic opportunity: Small fish in a big ocean

Industrial tuna fishing is by nature a high risk, high skilled and capital intensive industry (particularly purse seine). By the late 1980s when Pacific island states first started seriously considering establishing their own tuna industries (partly in response to ongoing low access fees), the global tuna industry was entering a period of low profitability and high competition which continues to the present day. Island states discovered that they had access to the fish, but not the far more lucrative distribution and retail parts of the industry.

> In sum, by the time the Pacific Islanders were ready to invest, tuna harvesting and canning had become unprofitable, but going into raw material trading or retail/distribution, which *were* profitable activities, was not a serious option for the Pacific Island countries. The other players in these nodes were large, established, and diversified multi-national corporations with deep pockets, against which the PICs (Pacific Island Countries) did not stand a chance – even if they could have come up with the capital. ... By investing in fishing boats and gear, however, the PICs were sinking their money into the most competitive, risky, and low profit part of the commodity chain.[53]

50 Petersen, El. 2003.
51 Tarte, S. 1997.
52 Pretes, Ml. & Petersen, E. 2004.
53 Schurman, R. 1998. Tuna dreams: resource nationalism and the Pacific island's tuna industry. *Development and Change* 29: 107-136.

Beyond maximum economic yield: Undervalued resource rents

The Western and Central Pacific tuna fisheries are currently operating beyond their economic optimal. Over-capacity, over-fishing and economically inefficient fishing practices (such as purse seiners catching juvenile bigeye) are significantly undermining the profitability, and therefore the potential resource rent of the fishery. It has been estimated that the resource rent for the fishery would be maximised for the FFA region[54] if total fishing effort was reduced by approximately 50 per cent.[55]

In the current economically inefficient conditions, is unlikely that access fees based solely on commercial considerations would achieve much more than 6 – 8% of the landed value of the catch[56] (still more than currently paid). However, if reforms were introduced such as effort and capacity limits, then it is possible that access fees could be significantly increased to take advantage of the higher value of the resource rent.[57]

54 Model was based upon FFA member's EEZ excluding Aust/NZ, and included the enclosed high seas between.
55 Bertignac, M., Campbell, H., Hampton, J. & Hand, A. 2001.
56 Lewis, T. 2004.
57 Bertignac, M., Campbell, H., Hampton, J., & Hand, A. 2001.

Suggestions for improvement

With one notable exception, (US Multi-Lateral Treaty) the returns from DWFN fishing within island state EEZs have been less than hoped. The history of bilateral negotiations between DWFNs and Pacific island states demonstrates that bilaterals play to DWFN strengths and enable DWFN to divide and conquer island states.[58]

Whereas when Pacific island states negotiate multi-laterally, they do so from a position of strength because together they control access to necessary fishing grounds. This is demonstrated by the USA multi-lateral treaty where Pacific island states achieved far higher access fees and cooperation.[59]

Distant water fishing fleets depend upon access to EEZs for their financial viability. No surface fishing fleet, distant water or locally based, can profitably operate pole and line or purse seine vessels without some access to the island state EEZs.[60]

The key lesson is that Pacific island states must play to their strengths if they wish to increase their return from their EEZs. Future access fee negotiations should be transparent, multi-lateral and should play DWFNs against each other to maximise the highest returns and strongest compliance.[61]

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58 Good discussions of some of the issues in bilateral negotiations between DWFN and Pacific island states can be found in: Schurman, R. 1998, Tarte, S. 1999, and Barclay, K. & Cartwright, I. 2006.

59 The Treaty on Fisheries Between the Governments of Certain Pacific Island states and the Government of the United States was negotiated multi-laterally and signed in 1988. The treaty governs access for USA purse seiners to all FFA member's EEZs and includes catch reporting and other requirements. Access fees from the USA multi-lateral are far higher (exceeding 20% of landed value) than bilateral access fees with other DWFNs (3.5% to 6%).

60 Van Santen, G. & Muller, P. 2000. *Working apart or together: the case for a common approach to management of tuna resources in the Exclusive Economic Zones of Pacific Island Countries*. Pacific Island States Discussion Paper Series (10). World Bank. Washington.

61 These include other concepts proposed by Pretes, Ml. & Petersen, E. 2004, Parris, H. & Grafton, Q. R. 2006. Tuna-led sustainable development in the Pacific. Draft. Barclay, K. & Cartwright, I. 2006. Pretes, M. & Petersen, E. 2004.

Successful implementation of the various newly proposed economic and management strategies all depend upon island states protecting their sovereignty through regional cooperation. While this will likely require some sharing of benefits and costs to make it attractive to all parties, the increased value of the fishery should ensure that all stakeholders receive a long-term increase beyond any short-term benefit from a go-it-alone strategy.

The WCPO tuna fishery is currently an 'open access' fishery. While some regional[62] and national measures to limit fishing effort and capacity within EEZs have occurred, the lack of restraint and regulation across the range of the stocks, including high seas, is undermining the long-term sustainability of the most valuable species (bigeye and yellowfin) and devaluing the fishery through economic overfishing and overcapacity.

The new tuna commission offers island states the opportunity to protect the long-term sustainability of the fishery and increase their economic return through increasing its profitability, though not necessarily by increasing their catch. DWFNs and Pacific island states will need to cooperate closely at the commission to reduce effort and capacity to sustainable levels and optimise the economic efficiency of the fishery.

To achieve this, parties will need to look beyond short-term national self-interest and develop long term co-operative strategies that reflect the migratory and multi-gear nature of the fishery. These strategies will necessarily be creative and must share both benefits and burdens across the region to ensure widespread support and implementation. Bigeye conservation proposals may save bigeye from over-fishing and increase the profitability of the longline fishery, but will create winners and losers, and therefore risk failure, unless agreement is reached to share the benefits of the reforms (increased catch per unit effort for longline bigeye fleets) and the burden (potential decreases in catch per unit of effort for purse seine fleets).

Success will require trust and the development of collective goals; both environmental and economic. This will require a resolution of the fundamental dispute over rights to migratory fish stocks within EEZs. This is necessary to ensure that both groups feel satisfied that they will achieve more out of the process than they lose.

Pacific island states naturally wish to expand their participation in the tuna fishery.[63] The question for island states is how to increase their return from the fishery through maximising the value of their EEZs and guaranteeing their future economic value.

62 The Palau Arrangement.
63 Western and Central Pacific Fisheries Commission. 2005. *Summary Record*.

Pacific island states should work through the WCPFC and the Forum Fisheries Agency towards a goal of conserving the tuna fisheries and optimising their economic efficiency. Objectives that support this include:

- Reduce fishing mortality to sustainable levels;
- Reduce fishing effort to economically optimal levels;
- Restructure fishing industry to optimise economic returns and avoid environmentally unsustainable methods;
- Negotiate transparent multi-lateral access agreements that work to the island states advantage (their control of roughly two thirds of the fishery);
- Develop resource sharing agreements that equitably share the benefits and burdens across participants.

Finally, achieving these objectives will require regional unity, firstly amongst the island states, and secondly with DWFNs. This will require that island states clarify their national objectives to the extent necessary to guarantee long-term policy stability and avoid regionally damaging policy reversals in response to DWFN pressure.