

TUNA FISHERY MANAGEMENT IN THE WESTERN CENTRAL PACIFIC - AN INDUSTRY PERSPECTIVE

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ABSTRACT

The Western Central Pacific Fishery Commission (WCPFC) was inaugurated in 2004 after a preparatory process which commenced in 1996. Scientific advice is that skipjack stocks are in good condition, but bigeye and yellowfin stocks are being exploited too heavily and reductions of effort are needed to avoid overfishing. Compared to other RFMOs the WCPFC has a lot of its area within national EEZs, many of them small, developing States. Decisions at the WCPFC are taken by consensus, and so far no consensus has emerged about management measures. The largest component of the tuna catch is that of purse seiners. The Parties to the Nauru Agreement (PNA), whose waters includes the most prolific surface tuna fisheries, have introduced a novel scheme whereby purse seiner days will be limited. This replaces a simple vessel numbers limit. PNA members expect this to create a more active market for fishing licenses and an increase in fees. The scheme is untested, and will create an 'Olympic' style fishery leading to increased capacity and potential fishing down of the tuna stock. Capacity limits are important in order to prevent over-exploitation. Transferable individual quotas within a science based overall quota could be an effective means of maximizing value for resource owners and fishers alike, whilst conserving the resource. ITQs may not be widely acceptable today due to lack of confidence in Government policy.

Introduction

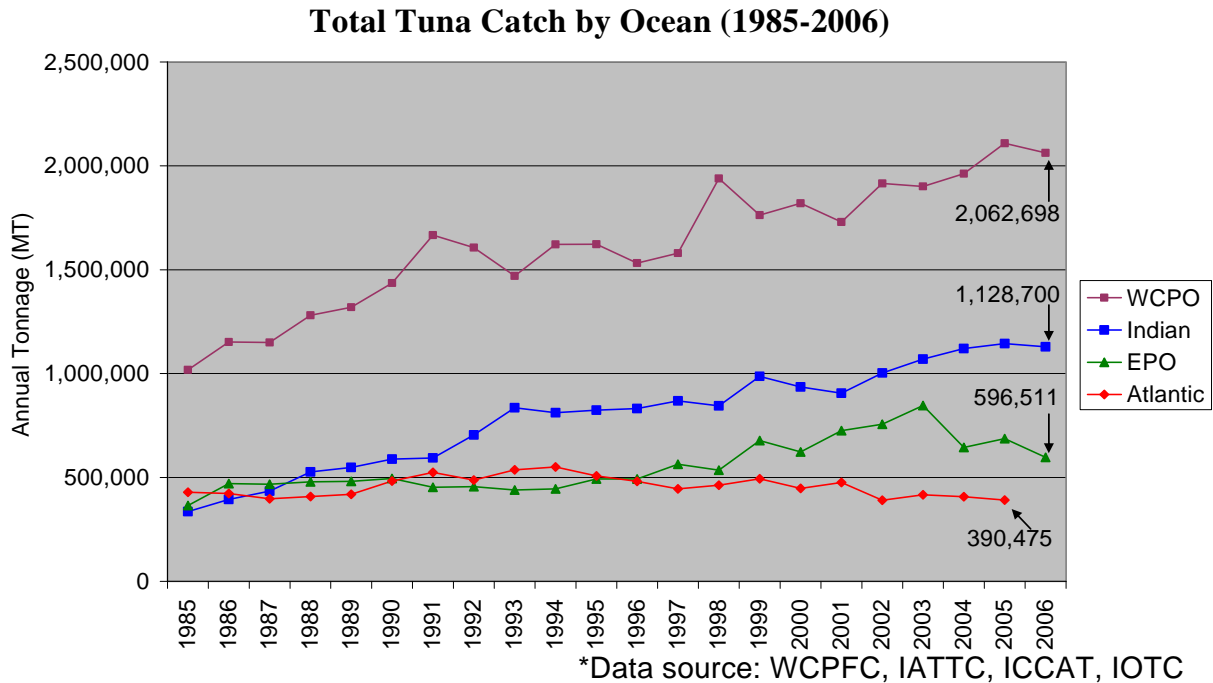
Much of the tuna's life cycle is spent in international waters. Regional Fishery Management Organisations (RFMOs) have existed since 1949 when the Inter American Tropical Tuna Commission was inaugurated. Since then, the ICCAT (Atlantic) 1966, IOTC (Indian Ocean) and WCPFC (Western Pacific) have all come into being. The results achieved by these RFMOs have been very disappointing. Consensus-based decision making, the diversity of membership and the problems of enforcement outside areas of national jurisdiction are major impediments to the efficacy of these organisations. Nonetheless, without the RFMOs the situation today would undoubtedly be much worse. The WCPFC is unique amongst tuna RFMOs in that such a large part of its area lies within the EEZs of member States. The most prolific skipjack fishing areas in particular, lie mainly within the EEZs of seven Pacific Island States: Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, and Tuvalu.

Wild caught tuna is a wonderful natural resource: nutritious, tasty, versatile, and still quite abundant. However, the catching trends are not good; threatening declining future catches and negative consumer attitudes. The northern bluefin fishery is a sad and cautionary tale. An extremely valuable and relatively abundant tuna species has been allowed to decline, year after year, in spite of nearly forty years of 'management' by the relevant RFMO. Different actions will be required to ensure that the same fate does not await the Western Central Pacific tunas.

Catch Perspective:

First, a summary of catch trends in recent years.

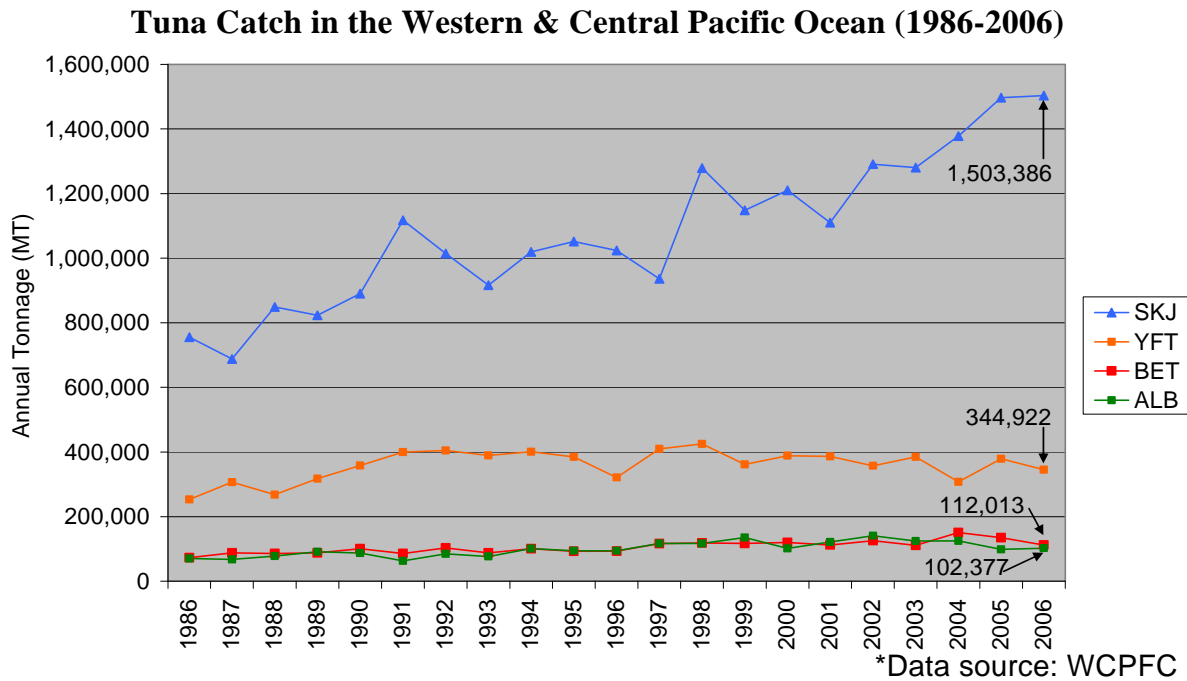
The relative importance of each ocean area is shown below:



These are the total catches of the four main tuna species, over the past twenty years.

The Western Pacific produced 49 per cent of the world catch in 2006, and is the world’s major source of tuna. This share may well increase in future, through a combination of increased catches in the area, and reduced abundance in others. Effective resource management in the WCPFC area is essential for the global health of tuna stocks.

The following graph shows the WCPFC area catch by species:



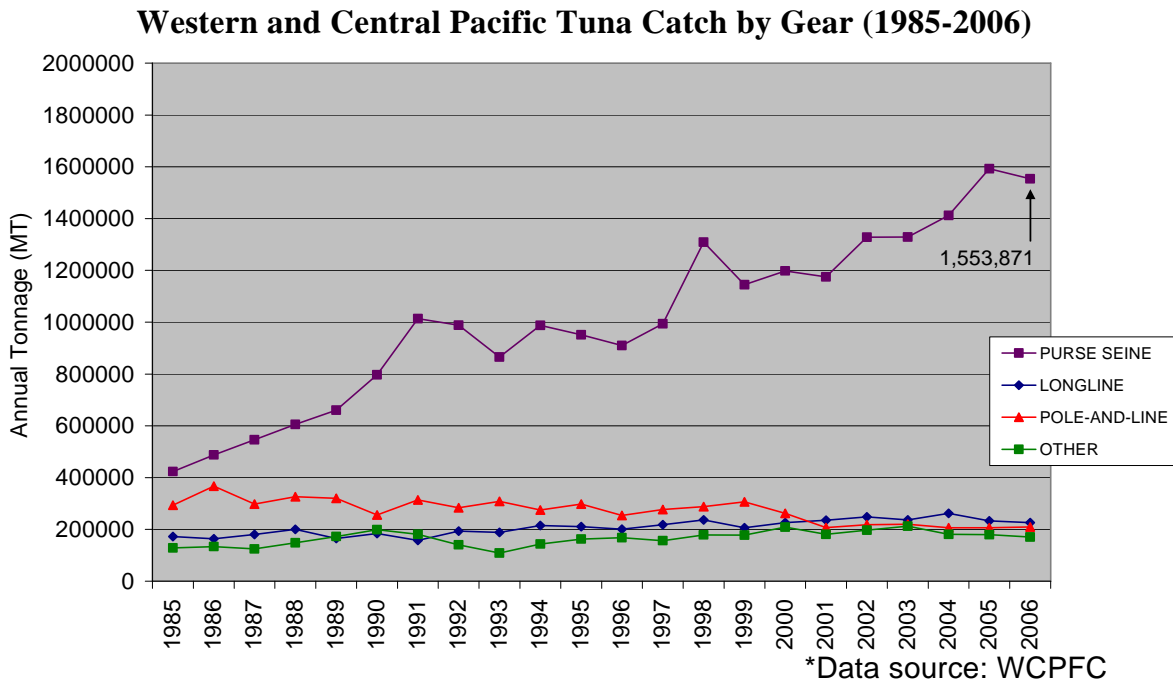
Skipjack catch has been increasing for the past twenty years, largely due to an increasing and increasingly productive purse seiner fleet. Skipjack is by far the most significant volume catch. Scientific advice is that the stock could be fished more heavily without overfishing occurring.

Yellowfin catch has been remarkably stable since the early nineties, but the scientific advice is that overfishing may be taking place. There has been apparent catch stability in spite of a large increase in purse seiner effort and fishing efficiency.

Bigeye catch has been fairly stable, but the scientific advice is that overfishing is occurring, and the stock is close to being overfished.

Albacore catch has been stable.

The next graph shows WCPFC area catch by fishing gear type:



Whilst longline catch has been fairly stable, pole and line catch has been in a long, steady decline. The doubling of catch since 1985 has been driven by the purse seine fleet, which has grown in numbers, vessel size, power and efficiency.

The need for effective management measures is clear, with an emphasis on the purse seine catch, due to its dominant role. Skipjack is abundant and scientific opinion is that it could bear increased exploitation. We all hope that is the correct assessment, but with due respect to our friends in the scientific community, there are many examples of fisheries, once abundant, now severely depleted.

Scientists and administrators have often failed to foresee the great technological advances which have so dramatically increased fishing efficiency. There are examples of once great fisheries which nobody at the time considered exhaustible. Today we realise that the seemingly inexhaustible is in fact only too easily exhaustible. If ever there was a moment to implement management measures and apply them according to the precautionary principle, it is now.

Management Measures

Management measures under discussion today consist mainly of capacity limits, catch retention, area closures and FAD fishing restrictions.

Capacity Limits

Increasing numbers of fishing vessels, and their increased capacity and efficiency are driving increased catches. The most significant influence is the purse seiner fleet.

The Western Pacific purse seiner fleet has increased in recent years, largely due to active new building programmes by Far Eastern owners, and the growth of non-traditional fleets. In addition, South American vessels have recently fished regularly within the WCPFC area. Poor fishing and closures in the Eastern Pacific have made fishing in the WCPFC area more attractive, particularly for the larger vessels. If Indian Ocean fishing continues to be poor we can expect movement of vessels from that Ocean to the Western Pacific.

The US fleet declined during the early nineties, reaching a low of 11 vessels in 2006, but is now resurgent: about thirty-five vessels are expected to be active by the end of 2008. This has been caused by several factors:

- Changes to the US Coast Guard manning regulations.
- The relatively low US Treaty license fee.
- Fear of restricted access, versus the wide US treaty access.
- The desire of US brands to source US origin fish.

The number of purse seiners in the Western Pacific was limited in the main fishing areas by The Palau Arrangement (PA), established in 1989 by the Parties to the Nauru Agreement (PNA), comprising Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands, and Tuvalu, within whose EEZs eighty per cent or more of the Western Pacific purse seiner tuna catch is taken. The PA set a limit of 205 vessels in 1992, allocated to specific distant water fishing nations (DWFNs) and domestic fleets. This limit had the merit of clarity, and could be monitored quite easily. The problem with the vessel limit was that it also allocated the vessels to specific flag States. PNA member country's ability to operate domestic vessels was restricted the 52 'domestic' vessel slots allocated under the scheme (as agreed at May 2004). Furthermore, there was no provision for new entrants, e.g. China and the EU. Some new entrants were allocated slots on the basis that the US fleet had declined, and were to have been removed if and when the US fleet increased. We shall now never know whether or not that would have happened. After some years of study the PNA group abandoned the vessel limit, and replaced it with a Vessel Day Scheme (VDS) in December 2007. Under the VDS fishing days are allocated to each of the PNA countries, after allowing for US Treaty and other regional multilateral licensing. The total number of days is based on recent fishing history. The national allocations are based on a combination of recent fishing effort records and estimated biomass with the respective EEZs.

It was understandable that PNA members should have wanted to abandon national allocations. By doing so more fishing States would be able to participate, thus creating more competition for licenses, as well as satisfying larger Government policy objectives (e.g. accommodation of important diplomatic partners). The VDS abolished national allocations, and opened the fishery to "all comers".

However, new vessels continue to enter the fishery: new buildings and older vessels from other areas. Successful operators have an interest in building new, more efficient and powerful vessels. With today's high fish prices, and relatively good fishing, there is plenty of incentive to move older vessels into the WCPFC area. The fleet as a whole does not take these decisions: they are taken by individual owners whose goal is to maximise catch and stay ahead of the competition – not to establish sustainable fishery management. Furthermore, these owners understandably desire to enter the fishery before any possible closure or curtailment, and are encouraged both by shipbuilders keen to build new vessels and PNA members anxious to develop their own fishing fleets and tuna industries. New vessels are entering the fishery at a much greater rate than old vessels leave. Meanwhile, there is neither oversight nor control, as the WCPFC struggles to find consensus to enact effective management measures, with little or no support from some of its members. Indeed, the thrust of PNA policy in relation to the WCPFC is that it (the

WCPFC) should have no say in the management of tuna within EEZs. It is no exaggeration to say that today; seiner capacity in the WCPFC is out of control.

In theory, the VDS could be an effective means of controlling fishing effort. However, for the VDS to be an effective it must be enforced rigorously. In this regard it should be noted that:

- The scheme relies heavily on the Forum Fisheries Agency (FFA) VMS – a system which has experienced problems in the past.
- The vessel length provisions may allow some vessels to buy only half the correct number of days – or put another way: effort may be double that recorded for some vessels.
- At present, the Scheme allows for days to be “borrowed” from future years. Faced with pressure from vessels requesting licenses, and their own desire to increase licensing revenues, countries will find ways to satisfy the demand, if necessary by borrowing days from subsequent years, and perhaps even by increasing the total days available.

Furthermore, the free flow or ‘trade’ in days (a key component of the scheme) between countries having excess, and those having shortage may not be achieved, and at very best may be inefficient. If a country with a relatively small allocation of days experiences high demand for licenses early in a year, other countries may not be willing to transfer any of their days, in case of need later in the year. The country concerned will then be forced to forego licensing, perhaps unnecessarily. More likely, the country concerned may simply choose to ignore the limitations. As we meet here, some countries are close to full utilisation of this year’s allocation of days.

Whilst many observers can see the theoretical values of the VDS, they are very concerned that it is highly ambitious, untried elsewhere on such a large multinational scale, requires a level of technical support not obviously available today, and implies that Government Fishery Officers will become adept traders of days. The VDS should be backed up by a capacity limit. A capacity limit and a VDS need not be mutually exclusive.

FFA members are vehemently opposed to capacity limits on the grounds that such limits would prevent members from developing their own fleets, by “locking in” the present State allocations. However, a capacity limit need only be an overall limit, and need not allocate to flag States: FFA members could retain their right to give fishing license priority to domestic vessels. One reason why FFA members are keen not to limit capacity is that they wish to establish catch histories of their own which would eventually support their claim to allocations of any future TAC set by the WCPFC. Whilst this is understandable it does make the agreement of capacity limits much more difficult.

There has been a huge increase in purse seiner capacity. When the limit was introduced in 1990, vessels with 1,000 tonnes capacity were unusual. Today they are commonplace, with many vessels of 1200-1500 tonnes, and some (some South American, but particularly European) up to and over 2,000 tonnes. At the same time, daily freezing capacities, winch and power block capacities, and net sizes have all increased *pari passu*. The sophistication of electronic aids to navigation, fish finding and communications has also increased dramatically, including buoy technology for marking and locating floating objects.

At December 2007 222 vessels were recorded – an increase of 11% compared to a year earlier. Comparing the catch per purse seiner in 1992 with the catch in 2006, the 196 vessels registered in 2006 were equivalent to 330 vessels in 1992 – an increase of 68%. Additionally, the VDS may usher in an “Olympic” style fishery. Owners will introduce more efficient vessels to better utilise existing days. Owners will probably want to fish down their allocation of days as soon as possible, before the quantum of days each year is exhausted.

Capacity limits are not a perfect tool: vessels can become more efficient whilst maintaining capacity limits set in terms of vessel numbers or well size. Nonetheless, over-capitalization in fisheries is an acknowledged worldwide problem, and a limit does have the merit of relatively easy monitoring and enforcement. Management measures which do not address capacity issues are deficient. Markets cannot be relied on to regulate capacity.

Purse seiner capacity is growing, and is likely to continue to grow, particularly in the Western Pacific. The situation is exactly as described in Garret Hardin's 1968 essay "Tragedy of the Commons". The marginal utility of a single new vessel accrues fully to the benefit of the owner immediately. The disutility caused by overcapacity is shared by each stakeholder over time. To quote Hardin: "Freedom in a commons brings ruin to all."

Catch Retention:

The issue of catch retention has largely been overtaken by market prices. Today vessels have every incentive to retain small fish onboard. Today, even the smallest skipjack is much more valuable than a large SJ of a year ago. In any event, however laudable in conservation terms, catch retention alone means little without effort or capacity restrictions.

Time Closures:

In the Western Pacific some vessel owners support closures, but PNA members have adamantly resisted for reasons including economic inefficiency and the sustaining of over capacity (a problem PNA apparently acknowledges but is unwilling to address), but mainly because closures are expected to result in a significant reduction of skipjack catch in PNA waters, with a concomitant decrease in licensing revenues. Ironically, the FAD closures favoured by PNA will also result in a large reduction of skipjack catch.

The efficacy of closures is not certain. Boat owners can use closure periods to undertake maintenance, thus allowing the vessels to fish harder for the rest of the year. This may be an important point for old vessels that need a lot of maintenance. It is not so important for newer (and even not so new) vessels which could be expected to go two to three years or more between major maintenance periods (e.g. the high productivity oriental fleets in the Western Pacific).

It is often said (by PNA members) that closures have failed in the Eastern Pacific, and that therefore they are not worth implementing in the West. If we examine the Eastern Pacific experience, the IATTC has implemented total closures of the purse seiner fishery since 2002, when purse seining was banned during December that year. The closure was extended in 2003 to 42 days in August/September, plus a December closure in a small area off Central America. From 2004 to 2007 the 42 day closures were allowed in either the August/September or November/December periods. A recent (June 2008) meeting failed to agree on any closures for 2008 (mainly due to the objections of a single member). Information to hand at present is that both Panama and Ecuador will unilaterally apply closures for their own fleets.

It should also be noted that whilst 42 days is about 11.5% of the year, purse seiner capacity in the EPO increased by about the same amount during the period 2003 to 2006, thus offsetting the effect of the closures. Nonetheless, it seems certain that the situation would have been much worse if there had been no closures, and it is incorrect to state that closures have failed. The correct conclusion to be drawn is that closures alone are insufficient in the absence of capacity limits.

FAD Closures:

There is concern that catches taken under FAD's include small yellowfin and bigeye, and that therefore, such fishing methods should be restricted. Such closures have been imposed elsewhere. ICCAT closed floating object fishing in the November/January period from 1997 to 1999, but not since. The closure resulted in a substantial drop in the skipjack catch. In 1998 IATTC established quotas of bigeye, which when reached would trigger closure of floating object fishing. The fishery was duly closed in 1998, 1999 and 2000, but since then the quotas have not been reached.

In the Western Pacific PNA countries have recently announced a three month FAD closure within their EEZs from July 2009. There are doubts about the efficacy of such a measure.

- It would need 100% observer coverage.
- The temptation to cheat, particularly over such a long period will be great.
- Part of the attraction of FAD closure is founded on the fallacy that vessels can quickly switch to school fishing.
- FADS (and other floating objects) will continue to aggregate tunas.
- Defining exactly what constitutes a floating object set could be difficult.

Some vessels may choose to tie up. Most of those that continue to fish will most likely experience significant catch reductions, mainly skipjack. PNA countries oppose time closures because they fear the consequent drop in skipjack catch will reduce licensing revenues; but a three month floating object closure (if properly enforced) would also have a significant impact on skipjack catches.

In a world that increasingly seeks economies of fossil fuel consumption it is relevant that floating object fishing is much less fuel intensive than school fishing (which involves steaming long distances, often at maximum speeds, and in many cases the use of helicopters). It can be argued that floating object fishing should be encouraged, as it is a highly fuel efficient method.

Other Options:

Catch related management tools are theoretically possible, but have not attracted much attention so far:

Total Allowable Catch Quotas:

The main problem with TAC's is accurately reporting the catch. With multiple unloading ports in a truly multinational fishery, timely and accurate recording of catches is extremely difficult. The multispecies nature of the purse seine fishery would also complicate administration. There would be a temptation to "high grade" catches by discarding the least valuable parts. The setting of the TAC's would become a source of political contention, as the science is debated by stakeholders. The ability of essentially politically dominated organisations to set TACs within the compass of sound scientific advice has been very discouraging in other major fisheries, and there is nothing to suggest that the WCPFC would be any different – on the contrary, experience thus far seems to indicate that it could be a great deal worse.

Rights Based Management (ITQs):

Over capitalization and the "race to fish" are twin evils affecting the health of fish stocks, fishermen, and fish resource owners in many fisheries. Rights based management has worked elsewhere. Resource owners retain sovereign rights over fish stocks within their EEZ's, but in effect "lease" them to fishing entities for periods of time, in the form of individual transferable quotas (ITQs). The relevant RFMOs would make compatible allocations in the high seas areas. These ITQs would become part of a strategic

plan which takes into account the interests and goals of each party. In effect, this partially happens when fishing entities agree to invest onshore in return for access. The move towards a formalized rights based management programme should not be too difficult. Given the migratory nature of tuna stocks an ITQ scheme would need a significant degree of regional cooperation, to ensure that fishing vessels could fish effectively throughout the year. Achieving the regional cooperation may be more difficult than achieving satisfactory resource owner/fishing entity relationships, although there would probably be some reluctance on the part of fishing vessel owners, based on perceptions of unstable policy implementation within Regional governments.

Sustainability & the Way Forward:

Sustainability is the most important issue facing tuna fisheries in the coming years. Just as the dolphin issue wrought drastic changes in the industry, so will the over-fishing of tuna stocks. The growing trend towards eco-labelling is a straw in the wind that the industry (in its widest sense) cannot ignore. We are already seeing action by major retailers and brands to ensure that their products are sourced from sustainably fished resources. A widespread perception by consumers that tuna is being fished unsustainably could have very negative effects on consumer demand. The consequences would reverberate throughout the supply chain: all the way back to fishermen and resource owners.

In future there may be two tuna fisheries/markets: one certified as sustainable, the other not. The certified fishery would enjoy strong demand and firm prices. The uncertified would find itself selling into a more restricted market, with consequently weaker prices. Lower prices would drive vessels to catch more, which in turn would push prices further down.

What then is the way forward? I would offer these suggestions (not in any order of priority) - not as a final solution by any means, but as a way to progress towards the goal of sustainability.

- Capacity limits for all categories of fishing vessels.
- Where overfishing is taking place there should also be time closures where required to bring effort into line with maximum sustainable catch.
- Buyers of tuna should not buy the catch of vessels listed on the IUU list of any RFMO.
- Sharing the burden: purse seiners take most of the catch, and should bear most of the conservation burden, but the longline fleet should not be exempted.
- Measures must be applied throughout the range, i.e., in all ocean areas, including archipelagic waters, notwithstanding coastal State's sovereignty over territorial waters. We hear much of "sovereign rights" – we need to hear more of "international responsibilities".
- RFMOs and Regional groups should work towards rights based management schemes.

The WCPFC has an extremely diverse membership: rich, poor, developed, developing, large and small countries. Countries with large fishing industries and countries with none. Countries with great fishing grounds, countries with few. Reaching consensus within such diverse groups is extremely difficult. Sovereignty and national pride play important roles. Historical fishing activity should be respected, even if it is not perpetuated. In the search for ways forward many compromises will be necessary and RFMOs should not let the perfect become the enemy of the good.

These tuna fisheries of the Western Central Pacific are one of the last great wild fish resources on the planet, and good stewardship is urgently needed. Many fisheries have declined and even collapsed while

the participants procrastinated. I will leave you with a quotation from the Spanish born American philosopher George Santayana:

“Those who cannot remember the past are condemned to repeat it”.

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