

Western and Central Pacific Fisheries Commission
Eighth Regular Session of the Science Committee (SC 8)
Busan, Republic of South Korea, 7–15 August 2012

Introduction

The wide range of research papers being presented for review at the upcoming Eighth Regular Session of the Science Committee of the WCPFC (SC8), show that fisheries management in the Pacific has reached a vital cross-road for the future of these fisheries and the nations that rely on them.

On the one hand, the scientists from the Oceanic Fisheries Programme of the Secretariat of the Pacific Community (SPC-OFP) have submitted a strong series of papers reviewing options for setting fisheries reference points and harvest control rules that, if adopted by the WCPFC, could pave the way for strong precautionary, ecosystem-based management that will ensure a positive future for Pacific fisheries and marine life. On the other hand, further analyses of fisheries data and the stock status of a range of tuna and non-tuna species caught in these fisheries demonstrate the continuing failure of current management practices to maintain healthy fish stocks and healthy, viable fisheries.

Armed with this knowledge, scientists at this meeting are now in the position to make strong recommendations for managing and protecting the full range of marine life and fisheries of the Western & Central Pacific Ocean. What remains to be seen is whether fisheries managers have the respect and foresight to take their advice.

Review of future management options

The SPC-OFP have produced a comprehensive set of papers that explore the various key options available to the WCPFC for choosing and setting limit reference points¹ (that correspond to the state of a stock that must be avoided), target reference points² (that indicate the ideal state in which a stock should be maintained according to a set of biological, ecological, economic and social goals) and the harvest control rules³ that define what actions must be taken to ensure that there is a very low risk that the fishery will exceed the limit reference points. Setting strong fisheries reference points and harvest control rules are a key part of implementing the FAO Code of Conduct for Responsible Fisheries⁴ and the UN Fish Stocks Agreement.⁵

The review and discussion of these papers at SC8 will guide SPC-OFP on what additional work is required in order to present scientific recommendations for limit reference points and to adequately explain and model the range of proposals for target references and harvest control rules to the WCPFC Management Objectives Workshop later this year.

It is important to note that these papers all emphasize that the current reference points used by the WCPFC for determining the 'relative health' of tuna fisheries – the maximum sustainable yield (MSY) and the corresponding biomass (B_{MSY}) and fishing rate (F_{MSY}) – should be, at best, treated as limit reference points (to be avoided) according to the FAO Code and UN Fish Stocks Agreement. The SPC-OFP notes that: "given the uncertainties in assessing stock status and natural stock variability, practical experience and scientific analysis has shown that treating F_{MSY} as a target often results in depletion of fish stocks, and that recovery from over-depletion is difficult. The use of MSY as a target is also often sub-optimal economically."⁶

In addition, the SPC-OFP has proposed an additional research project to investigate the possibility that range contraction is occurring for some species as their abundance declines. New Zealand has expressed concern regarding possible contraction of the yellowfin stock, while Japan, Australia, New Zealand and Hawaii have discussed similar concerns for skipjack. The potential of range contraction is an important consideration for fisheries operating at the edge of a species' range when setting reference points.⁷

Greenpeace would like to acknowledge the important work by SPC-OFP in this area and urges the SC to make strong recommendations to the WCPFC to set limit reference points this year. While Greenpeace accepts that ultimately the assurance that limit reference points are not breached by fisheries depends on choosing good target reference points and harvest control rules, and on swift action by management; however, we also believe that a 'sea change' in how managers (and industry) perceive and understand limit reference points is key to gaining agreement for significantly improving management of Pacific fisheries.

Review of current fisheries management practices

This year, there are no new assessments of the skipjack, yellowfin or bigeye stocks, rather the SFP-OFP have focused on reviewing the implementation and effectiveness of key management measures for tropical tuna; improving the assessment of the South Pacific albacore stock; and updating assessments of key billfish and sharks caught in the tuna or mixed fisheries. The concerning results presented highlight the urgent need for WCPFC to adopt precautionary ecosystem-based management reference points and harvest control rules for all key target and bycatch species.

Bigeye and yellowfin tuna

Yellowfin stock indicators determined in 2011 are close to F_{MSY} and B_{MSY} reference points and there are significant uncertainties involved in the assessments. The high mortality rate of juvenile yellowfin, primarily due to purse seine FAD fisheries is of particular concern, with the SC7 concluding the productivity of the stock would be significantly increased if juvenile catches were decreased.⁸

Overfishing and the increased harvest of juveniles have significantly reduced the bigeye stock.⁹ Based on the average recruitment in recent years, scientists concluded that the bigeye tuna stock is also likely to have dropped below B_{MSY} and the spawning biomass is as low as 23% of its potential spawning level.¹⁰

The Conservation and Management Measure 2008-01 (CMM-2008-01) adopted in 2008, aimed to reduce the high fishing mortality on bigeye tuna by 30% from the 2001–2004 average level and limit yellowfin tuna fishing mortality to its 2001–2004 level, in order to prevent stocks from falling below B_{MSY} . A combination of measures were agreed including longline catch limits, purse seine effort limits, a partial ban on purse seine fishing using fish aggregation devices (FADs), and a closure of two high-seas pockets to purse seine fishing. Most of these measures have various exemptions or alternatives built in and were to be phased in over the period 2009–2011. Data presented at last year's meeting (SC7) made it clear that the CMM-2008-01 was unlikely to achieve its goals, and more recent fisheries data, to be reviewed at SC8, has confirmed this. Notably, the studies confirm the findings from SC7 that even if CMM-2008-01 was implemented without exemptions, the reduction of overfishing on bigeye would still not be reduced to below the overfishing level (estimated reduction of F/F_{MSY} from 1.35 to 1.17). Key findings are as follows.¹¹

- Rather than a reduction in purse seine effort, there has been an increase since the introduction of CMM-2008-01. Effort in 2010 increased by about 18% from 2004 levels, and VMS data for 2011 indicates a further increase of 11% above 2010 effort levels and 31% over 2004 levels. In addition, the effectiveness of the effort as also increased.
- The FAD closures did result in moderately reduced yellowfin (and skipjack) catches and strongly reduced bigeye catches during the closure periods, and the average size of fish in the catches were higher for all species during the closures because of the larger fish caught by unassociated

sets. However, despite the closures, the total estimated number of FAD sets made in 2011 was a record high, mainly due to increased purse seine effort overall.

- The closures of high seas pockets to purse seine fishing since 1 January 2010 has largely been respected, and the effort has remained concentrated in EEZ, without transferring to eastern high seas. However, scientists remain concerned that purse seine effort could move east with the predicted shift from *La Niña* to neutral or *El Niño* environmental conditions.
- Longline catches of bigeye have been reduced – the 2010 catch was 79% of the average catch for 2001–2004, and in 2011, reported catch fell slightly to 76% of the 2001–2004 level. However, for some flag states, current catches are lower than their agreed limits and there is, therefore, potential for their longline catches to increase again. In addition, in the core area of the tropical longline fishery, catch reductions have occurred alongside a decline in catch-per-unit-effort (CPUE), and therefore recent catch declines may be, in part, due to a further decline in the bigeye stock. Longline catches of yellowfin for 2010 and 2011 are close to the 2001–2004 average.

Skipjack and South Pacific albacore tuna

A new, more robust assessment for Southern albacore¹² will be discussed at SC8, while the most recent skipjack assessment is from 2011.¹³ Both these stocks are considered 'healthy' with stock indicators significantly above B_{MSY} and below F_{MSY} . However, potential skipjack range contraction and the decline in catches for some nations – such as the Japanese pole-and-line fleet – means that 'healthy' is a relative term. Similarly, the CPUE for albacore is an important consideration for the continuing commercial viability of albacore fisheries, particularly the domestic long-line fleets of Pacific Island nations. Both these factors highlight the need for the WCPFC to develop precautionary reference points and harvest control strategies for these fisheries.

Sharks and billfish

Assessments for two key shark species, oceanic whitetip sharks and silky sharks, show that Pacific populations of these species are in a dangerously poor state.^{14, 15} They are most often caught as bycatch in the Pacific tuna fisheries, though some directed mixed species fisheries for sharks, tunas and billfish do exist. These sharks are being exploited at fishing rates well in excess of the F_{MSY} (as much as five times greater), and stocks have declined to well below SB_{MSY} . For silky shark, the greatest impact on the stock is attributed to bycatch from the longline fishery, but there are also significant impacts from the associated purse seine fishery which catches predominantly juveniles. The fishing mortality from the associated purse seine fishery is itself above F_{MSY} .

The assessment of striped marlin in the south west Pacific shows that current catch rates are approaching F_{MSY} , and current total and spawning biomass are close to the associated B_{MSY} levels and approaching an overfished state.¹⁶

Key Greenpeace recommendations for SC8

Greenpeace urges the scientists at SC8 to make strong recommendations to the WCPFC to:

1. Set the limit reference points recommended by the SC this year and make significant progress on agreeing strong target reference points and harvest control rules.
2. Support the SPC-OFP proposal for an additional research project to investigate the possibility of range contraction for WCPFC stocks.
3. Reduce fishing mortality of bigeye by 50% from 2011 assessment levels to reflect both the uncertainty in assessments and the need to avoid B_{MSY} and F_{MSY} stock indicators a high degree of probability.
4. Extend the current high seas pocket closures to include all types of fishing.

5. Adopt and implement the closure of the additional two high seas pockets further east to all fishing in order to strengthen the benefits derived from the existing high seas pockets closures and to prevent any transfer of high seas effort, in particular IUU fishing effort, from the closed pockets into new areas.
6. Adopt and implement a complete year-round ban on the use of FADs in association with purse seine fishing in order to help address overcapacity, reduce catches of juvenile bigeye and yellowfin tuna, and reduce bycatch of oceanic whitetip and silky sharks.

References

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- ⁹ Paragraphs 10 & 18 of Executive Summary, & paragraph 141: SC (2011). Summary Report. Seventh Regular Session of the Science Committee, WCPFC. 9–17 August 2011, Pohnpei, Federated States of Micronesia. <http://www.wcpfc.int/node/3961>
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