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Monitoring the effectiveness of Conservation and Management Measures for bycatch

WCPFC-SC5-2009/EB-WP-09

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1. Introduction

In response to requests from Pacific Island countries and territories, the Secretariat of the Pacific Community's Oceanic Fisheries Programme (SPC-OFP) has in recent years delivered training in oceanic fisheries science, including the analysis of fisheries impacts on bycatch (also known as Ecological Risk Assessment, ERA). These annual workshops have covered the development of indicators using observer data, the use of Productivity-Susceptibility Analyses (PSAs), oceanography of the western and central Pacific Ocean (WCPO), the foundations of trophic ecology, and ecosystem modeling. These and other research activities were discussed at the 2009 ERA workshop, but for one day the workshop focused on the subject of this paper: "*Monitoring the effectiveness of WCPFC Conservation and Management Measures for bycatch*".

Evaluating the effectiveness of CMMs in this context should still be regarded as monitoring and analysis for *scientific* purposes. It not the same as monitoring for *compliance* purposes, which is an exercise in law enforcement. The workshop was therefore concerned with the scientific monitoring and analysis needed to determine what outcomes are being achieved by CMMs, even assuming complete compliance.

The 2007 and 2008 training workshops were held at SPC headquarters in Nouméa, New Caledonia, but for logistical reasons the 2009 workshop was held in Auckland, New Zealand. The workshop lasted for 2 days in between Parts 1 & 2 of the SPC-OFP Stock Assessment Workshop, and following on from the Tuna Data Workshop, so that participants could maximize their opportunities for scientific capacity building. The ERA training was delivered by SPC-OFP fisheries scientists David Kirby and Simon Nicol, with considerable and much appreciated logistical assistance from Don Bromhead, SPC-OFP scientist in charge of the stock assessment workshops, and from SPC-OFP administrative staff members Kay Parry and Helene Ixeco.

The provision of this training is consistent with the founding charter and general purpose of both SPC and WCPFC, under Article 30 of the WCPFC Convention detailing the Special Requirements of the Small Island Developing States (SIDS). Funding for the staff members delivering the training was provided by WCPFC, with funding for participants coming from the Japan Trust Fund (JTF), Papua New Guinea National Fisheries Authority (NFA), the French Pacific Fund (FPF) and the United Nations Department of Ocean Affairs and Law of the Sea (UNDOALOS).

2. Aims of the theme session

The aims of the theme session at the 2009 workshop were as follows:

1. To understand the purpose of regulation by WCPFC and its CCMs
2. To discuss the pros and cons of different approaches to regulation
3. To review the international regulations for managing the effects on bycatch of oceanic fisheries in WCPO (i.e. WCPFC CMMs and Resolutions)
4. To determine what kind of scientific monitoring and analysis is necessary to determine what **outcomes** are being achieved by WCPFC CMMs for bycatch

Participants were encouraged to critically review the WCPFC CMMs from the perspective of monitoring and analyzing their outcomes. The group was to discuss focus on what the outcomes are, rather than what they should be, except where the stated objectives of the WCPFC Convention and the anticipated outcomes of the CMMs are not consistent with each other. In such cases, the group discussed what actions might result in outcomes more consistent with the explicit or implicit objectives of the CMM or the Convention; the group also discussed how objectives might be better defined in order to be more open to scientific monitoring and analysis.

The WCPFC CMMs evaluated by the workshop are listed in Table 1. Before reviewing relevant issues from the WCPFC Convention and the actual CMMs for bycatch, the introductory session looked more generally at the purpose of regulation, using an example from completely outside the context of the WCPFC: the regulatory approaches of the UK Financial Services Authority (FSA) were discussed in relation to the present global financial crisis, which the FSA (among other agents from the UK and elsewhere, as well as the relevant international agencies) failed both to anticipate or prevent. This approach was taken in order to recognize that the WCPFC, as a particular type of regulatory authority (i.e. Regional Fisheries Management Organisation, RFMO), has a general purpose that is largely the same as other agencies regulating completely different sub-sectors of the global economy. The WCPFC must ensure that the aims of its founding Convention are realized through the actions of its members in developing and complying with CMMs. How well those CMMs are formulated, as well as the approach adopting by CMMs to compliance, will together determine the success of the WCPFC in achieving the aims of the Convention. A timely example of well-intentioned but ultimately unsuccessful regulation of the finance sector was therefore considered a pertinent cautionary example to discuss.

	DAY 1 FRIDAY 26TH JUNE	DAY 2 SATURDAY 27TH JUNE
Theme	THEME SESSION: MONITORING THE EFFECTIVENESS OF CMMS FOR BYCATCH	ECOSYSTEM SCIENCE STUDIES AT SPC-OFP
SESSION 1 (0900-1030)	(1) International responsibilities for the management of non-target associated and dependent species (WCPFC Convention) (2) Introduction to the scientific evaluation of Conservation and Management Measures	(1) Modelling ecosystem dynamics with SEAPODYM (2) Oceanography of the WCPO (3) Trophic Ecology (4) Seamounts in the WCPO
MORNING TEA (1030-1100)		
SESSION 2 (1100-1230)	CMM 2008-06 Conservation and Management of Sharks	Biology and ecology of tunas (1) PTTP (2) South Pacific Albacore
LUNCH (1230-1330)		
SESSION 3 (1330-1500)	CMM 2007-04 Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds	
AFTERNOON TEA (1500-1530)		
SESSION 4 (1530-1700)	CMM 2008-03 Conservation and Management of Sea Turtles, including review of the draft 'WCPFC Guidelines for the Handling of Sea Turtles'	

Table 1. Agenda for the ecological risk assessment and ecosystem science workshop

In each session on the respective CMMs, the workshop went through the measures line by line, to ensure that everyone was familiar with the text. This was actually completed by early afternoon. At this stage the class was divided into three groups, each tasked with working on one of the three CMMs, taking the time to highlight and discuss the implications of each paragraph for scientific monitoring and analysis, drawing on each other's experience of implementing the CMMs at home. The rest of the paper details the predominant topics of discussion with emphasis on those issues that SC should consider with a view to making recommendations to the Commission.

3. Introduction to rule-based, principle-based and outcome-based regulation

Rule-based regulation can be very detailed, prescriptive and is not intended to be flexible; clear procedures and reporting requirements are usually specified. Rules are based on assumptions about how they will be applied in practice. However, behaviour may change in response to the rule and the exact response might not be correctly anticipated. This aspect is particularly relevant where objectives are implicit rather than explicit. It should also be acknowledged that rules never perfectly fit their purpose – they are usually either over-inclusive or under-inclusive – the challenge for the regulator is to minimise the difference between the rule's intended and actual effect. Finally, whether a rule is clear or not depends on whether those applying the rule agree on what it means: a rule that is very complex may not be well understood – conversely, ambiguity and vagueness in rules may also make them difficult to understand – effectiveness will be compromised in both cases.

There are various advantages & disadvantages of rule-based regulation. Ideally, rule-based regulation clearly specifies what is required in order to comply with the regulation (*literal compliance*). All players know what they need to do in order to comply, so there is no justification for non-compliance and enforcement is therefore straightforward. However, rule-based regulation encourages players to develop ways of getting around the rules while remaining within the law (*creative compliance*). An example might be a rule requiring a fishing vessel to carry a tori line but omitting to specify that it must be deployed while fishing – so long as the tori line is on board the vessel, even if it is stowed below deck, this would technically be within the law. The potential for abuse makes it less likely that the underlying goals of the rule will be achieved (*substantive compliance*) unless the rule covers all possible circumstances. It is also the reality that if regulations are developed by many players with very different values and perspectives, the result can be very weak, requiring minimum standards rather than best practice, and resulting in little substantive compliance.

Principle-based regulation relies on broad standards, granting flexibility and requiring judgment as to how they should be implemented. It focus on the purpose behind the rule rather than on any detailed provisions, and can therefore be more 'high-level', offering flexibility in determining how to comply. The advantage of principle-based regulation from the regulator's perspective, at least in theory, is that principles are hard to manipulate, making creative compliance more difficult.

Principle-based regulation may therefore lead to a greater degree of substantive compliance with the purpose of the rule, rather than just a "box-ticking" approach. An advantage of principles-based regulation from the perspective of those being regulated is that it can make life easier for honest players, who have to spend less time ensuring and demonstrating compliance with very complex rules. Principles-based regulation should also make life difficult for dishonest players, as they cannot obey the letter of the law while ignoring its spirit. Principles-based regulation should also be more effective under changing circumstances – the principle of the regulation might not change, whereas a detailed rule would generally have to be re-written.

The problems with principles-based regulation are that, firstly, there is a risk of inconsistent application of principles because of different interpretations by different players, resulting in literal and possibly creative compliance, but not substantive compliance. Secondly, if it is more difficult to detect and penalize weak/non-compliance by comparison to rule-based regulation, regulations becomes unenforceable. Finally, principles-based regulation relies on trust among players, and to quote the FSA Chief Executive of the UK Financial Services Authority (FSA) "a principles-based approach does not work with participants who have no principles." This is reflected in the experience of the FSA, which in 2006 was proudly promoting principles-based regulation, yet by 2009 it had presided over the near collapse of the UK and global financial system. The FSA is now adopting a different approach, whereby it will judge "the outcomes and consequences of actions, not the compliance with any individual rule." The FSA will also take a tougher approach to enforcement in the future. Its CEO recently warned that "People should be frightened of the FSA!"

Outcome-based regulation regards the ends to be more important than the means: the way to achieve an outcome might not be specified but players will be judged on whether or not they achieve the outcome rather than whether they follow any particular process. On balance, this is probably the most effective approach, whereby for any overarching principle, an outcome can be specified, a rule can then detail minimum standards, but players are free to improve on these standards and thus implement best practice. In the context of the WCPFC, the Convention text provides the principles, the CMMs provide the rules, but what are not presently clearly specified, are the desired outcomes. Scientific monitoring and analysis should be able to inform the Commission about the extent to which outcomes are being achieved.

4. WCPFC Conservation and Management Measure for Sharks (CMM-2008-06)

The WCPFC was established to conserve and manage fisheries impacts on the 'highly migratory fish species' listed in Annex 1 of the1982 United Nations Convention on the Law of the Sea, as well as 'associated and dependent species', better known as bycatch and predators/prey respectively. Of the 58 Annex 1 highly migratory fish species observed caught in oceanic fisheries of the WCPFC Convention Area, 30 are sharks; a further 21 species of non-Annex 1 sharks, rays and dogfish have been observed as bycatch (see EB-WP-08).

The sharks CMM was initially approved in December 2006 (CMM-2006-05), following a previous resolution concerning non-target fish species (Resolution 2005-03), and it became operational in January 2008. It was revised in December 2008 to remove the initial exclusion of vessels less than 24m in length-overall (LOA), to require the annual reporting of shark catches to the Commission, and the provision of preliminary advice on stock status of sharks to the Commission in 2010.

The *explicit* objective of the CMM is to promote the full utilisation of sharks that are incidentally caught. Full utilisation is defined in the measure as 'the retention by the fishing vessel of all parts of the shark excepting head, guts, and skins, to the point of first landing or transshipment', with the requirement that vessels have on board fins that total no more than 5% of the weight of sharks, thereby preventing the discard of shark carcasses while fins are retained. In itself, this objective is consistent with the aims of the Convention to 'minimize waste and discards' in WCPFC fisheries.

The *implicit* objective of the CMM, according to personal communication with people involved in its drafting, is to reduce fishing mortality on sharks. Prior to the initial CMM being passed it was estimated (Kirby 2006: SC2-EB-WP-1) that fishing mortality on sharks in WCPFC longline fisheries could be decreased by ca. 30% if full utilisation of sharks were required (SC2 Summary Report paragraph 186). In Hawaii longline fisheries, survivorship of sharks at the time of release has increased from approximately 30% before full utilisation regulations were passed to >80% since, depending on species (see Table 3 of Walsh et al. 2009, EB-IP-8). Subsequent post-release mortality has not been estimated for sharks in the Pacific, but Campana et al. (2009; EB-IP-7) give an estimate of ca. 20% for blue shark in the north Atlantic.

The problem in pursuing the *implicit* objective of the CMM to reduce fishing mortality through the *explicit* objective of the full utilisation requirement is the crucial assumption that retention patterns will not change, i.e. that in response to a prohibition on discarding of shark carcasses, fishers will not then choose to increase their retention of sharks rather than release sharks caught alive. This is not completely unrealistic, as handling of live sharks is dangerous and the requirement to retain the carcass could be yet another disincentive to land rather than release a live shark. But where markets exist and access to markets can be achieved, or where there are no regulations against dumping of landed carcasses, then the economic incentive remains to land sharks that are caught, whether or not they are alive at the time of capture.

A further loophole in the CMM, with respect to reducing fishing mortality by requiring full utilization, is that a fin-to-carcasse ratio that is not species-specific allows for roughly twice as many sharks to be killed as there are carcasses on board. This is not the case if fins are required to be naturally attached until unloading. For further discussion of the 5% ratio itself see Hindmarsh (2007, SC3-EB-WP-4).

The analyses informing the development of the shark CMM (Kirby 2006) and of the impact of national regulations in Hawai'i (Walsh et al. 2009) have been based on mortality indicators derived from observations of condition (i.e. life status / disposition) and fate (discarded vs. retained). These are useful indicators for the management of fisheries impacts, especially where any economic value of the retained catch is considered secondary to the goal of maximizing survival. But sharks can be of considerable economic value for their fins, if not necessarily their carcasses (see Clarke 2009, EB-WP-02). While fisheries impacts on seabirds and turtles may be managed under a guiding principle of minimization of impact (i.e. total fishing-induced mortality), sharks might be better managed, especially considering the terms of the Convention, by reference to maximum sustainable yield, *assuming that total catch and yield can be estimated*. This would provide statistically robust reference points in relation to stock status and fishing mortality, allow management objectives to be explicitly set for individual species. The problem with this stock assessment approach is that it will require much more data, technical expertise, time and money than has traditionally been allocated to analysis of fisheries impacts on sharks. EB-WP-8 discusses the feasibility of stock assessments for sharks in more detail.

Despite the scientific monitoring and analyses preceding (Kirby 2006) and following (Walsh et al. 2009) the initial CMM-2006-05 and the revised CMM-2008-06, the scientific rationale underlying the CMM is not obvious, nor are its desired outcomes, as it allows fishing mortality on sharks to increase, in full compliance with its terms.

The shark CMM would be more transparent, less prone to creative compliance, more open to substantive compliance, and more amenable to further scientific monitoring and analysis, if the desired outcome was explicitly expressed in terms of a decrease in fishing mortality by comparison to a reference year/period.

A further benefit of increased precision in the aims of the CMM is that it would make it easier for CCMs to develop alternative measures within areas under national jurisdiction, as they are entitled to do under Paragraph 11. Any alternative measures developed under this or any other CMM must be 'compatible' with the CMM, which is to say they must have 'equivalent effect' (Martin Tsamenyi pers. comm.). Alternative measures to the 5% fin-to-carcass ratio, such as requiring fins to be landed naturally attached to carcasses, may have an equivalent effect in terms of utilization (i.e. with the *explicit* objective of the CMM) but as there is no literal requirement for equivalency in terms of the *implicit* objective of reducing shark mortality, measures that do not require full utilization (e.g. quotas, catch/effort limits, area closures, etc.), might not be compatible with the CMM, even if they act to reduce shark mortality.

In addition to the issues discussed above and in the paper on the feasibility of shark stock assessments (EB-WP-8), workshop participants identified the following issues:

- There is a need for information on how to minimize bycatch of sharks, especially where there is no access to markets for carcasses or fins.
- In some countries, National Plans of Action (NPOAs) do not have a statutory basis in regulations, so any utilization requirements must be expressed in licensing agreements that are only enforceable under law of contract.
- In other countries, these licensing conditions form part of a statutory management plan, breach of which may result in confiscation of the vessel.
- Targeted shark fisheries can be sustainably managed, using a combination of technical and management measures – in Papua New Guinea, shark fishers are licensed to export shark fin while tuna fishers are not; it is forbidden to use wire traces in tuna fisheries; catch, effort and area controls all apply, but there may be illegal trade of shark fins from tuna fisheries through shark fishers.
- Monitoring of the utilization of carcasses beyond the point of first landing or transshipment is essential to determining whether the waste minimization objective is being achieved; silage production would be better than dumping.

5. CMM 2007-04 Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds

The seabird CMM is very detailed in its annexes describing mitigation measures and the workshop did not review all of these technical aspects. The group discussion was more focused on general aspects of the CMM that may affects its effectiveness in minimizing fishing impacts on seabirds. SC participants should see EB-WP-3 for more detailed information on seabird mitigation measures and EB-IP-12 for a comparison of seabird measures in RFMOs with special reference to streamer lines.

In relation to Table 1 of the CMM, which lists the possible combinations of mitigation measures that should be deployed, workshop participants recognized that for all of these methods listed, monitoring of the effectiveness and practicality of these or any other proposed mitigation measures should routinely be undertaken. There is no point requiring fishing fleets to use mitigation measures that are not effective, as this does not help the seabirds and it wastes time for the crew.

The scope of the CMM in terms of spatial coverage was then discussed, as it only applies to waters south of 30ºS and north of 23ºN. This latitudinal zoning is based on general seabird distributions (see EB-WP-6 Appendix 1) and observed interactions. However, there is still a risk of seabird interactions in sub-tropical and tropical waters – participants recognized this based on their own experience at home – and these interactions may have consequent population effects. (See EB-WP-6 for a detailed ecological risk assessment for seabirds, considering the spatial overlaps between fishing effort and seabird ranges, and also their biological productivity.) While it may not be necessary to require mitigation measures in these waters, this cannot be safely concluded unless good observer data are generated and analysed, including time series on seabird observations and correct identification of carcasses/beaks of dead seabirds.

There is a general need for better observer data coverage and skill, including the development of training and materials for species identification. This is especially important as under the WCPFC Regional Observer Programme, observers may be working in waters a long way from where they have trained and have prior experience. There is also a need for general outreach and education of fishing crew, to make them aware of the vulnerability of seabirds. In communicating this message it may be useful to emphasis the usefulness of seabirds for fishing, i.e. for locating fish!

North of 23ºN, the CMM has an exemption for fishing vessels with length <24m. Workshop participants did not believe that this was likely to be scientifically justified, and if it is then observer data should be presented to SC showing minimal seabird interactions by these vessels. Vessels in this length class are not necessarily small and should not therefore be exempt from requirements to carry observers, or from using mitigation measures if they are fishing in areas where seabird interactions are likely. Participants felt that best practice measures should be adopted by all vessels that have a risk of causing significant fishing mortality on seabird populations, if the principles of the Convention and the intended outcomes of the CMM are to be achieved.

6. CMM 2008-03 on the Conservation and Management of Sea Turtles, including the draft 'WCPFC Guidelines for the Handling of Sea Turtles'

After reviewing the text of this CMM, participants felt that much of the language was left far too open to interpretation. Qualifying phrases such as 'where appropriate' or 'if practicable' may well be justified in certain circumstances (e.g. paragraph 5.a.i., which recognizes that a turtle may be encircled accidentally) but as the CMM does not go on to detail what exactly is or isn't appropriate or practicable in the cases where these phrases are used, it makes the task of monitoring the effectiveness of the CMM that much harder. In some cases, the use of such phrases is obviously gratuitous – for example, in both paragraph 5 (a) iv. for purse seine, and paragraph 6 for longline, it is considered that the carrying of dip nets may or may not be 'appropriate' – while it is understandable that there are times when it may not be appropriate to 'employ' dip nets, it is not at all obvious when it would not be appropriate to 'carry' a dip net in the first place. Other language is stronger, for example in paragraph 2 regarding reporting to the Commission on implementation of the FAO guidelines and the CMM, which will enable subsequent monitoring of the effectiveness of the CMM.

The focus of paragraph 7 is on 'longline vessels that fish for swordfish in a shallow-set manner'. While the issue of targeting is not analysed, EB-WP-7 does provide some scientific evidence as to why shallow-set longlines are particularly hazardous for turtles, in terms of having much enhanced encounter rates. However, participants also noted that deep-set longlines still catch turtles (see EB-WP-7), so therefore it is not appropriate to exempt such fisheries from all measures designed to minimize fishing-induced mortality on turtles. Yet paragraph 8 only 'urges' rather than 'requires' further research on the effectiveness of circle hooks in these fisheries.

The definition of 'shallow-set' fisheries is left open to CCMs to determine, although a working but non-binding definition is provided in the CMM, i.e. those in which the majority of hooks fish at a depth <100m. This does create a risk of the desired outcomes not actually being achieved, as while it is good to be flexible by only requiring that the principle be respected, there is the possibility of creative compliance through CCMs proposing self-serving definitions of such fisheries.

Paragraph 7.b. regarding the definition of 'minimal observed interaction rates' will doubtless be the topic of some discussion at SC and papers EB-WP-4 and EB-WP-7 have been written to inform this discussion. While the scientific monitoring and analysis as carried out in EB-WP-7 is essential to any definition of what observed interaction rates might be considered minimal, the final definition is really a judgment on what is or is not acceptable, which should be based on openly stated criteria as, for example, articulated in EB-WP-4.

Workshop participants did not focus on the issue of interaction rates but did note that under this clause some fleets may be obliged to implement paragraph 7.a. (i.e. to use large circle hooks, finfish bait, and any other measure that might work) simply because they have not had observer coverage of at least 10% during a 3 year period. While observer data are essential to monitoring the effectiveness of CMMs for bycatch, it is recognized here that obliging CCMs to adopt mitigation measures for turtles simply because they cannot yet demonstrate that they do not have a problem may not be the best way of promoting substantive compliance with the CCM.

In further discussion on the implementation of the requirements regarding circle hooks it was recognized that there are concerns about possible reductions of catch rates for target species. Studies in Australia have shown that overall catch rates and the value of catch was actually increased by the use of circle hooks (SC4-EB-WP-9) but depending on exact hook type (see FT-IP-1), cost of bait and other fishery-specific factors, this may not be the case elsewhere. The requirement under the CMM to use only whole finfish bait may also have cost and supply implications. These factors will therefore require further monitoring and analysis for particular fisheries.

A very different issue affecting the effectiveness of management measures for turtles is that fact turtles usually also fall within the regulatory mandate of departments other than fisheries, i.e. environment or conservation. While participants recognize that

oceanic fisheries have the potential to be significant source of mortality for turtle populations, there are also other factors such as coastal fisheries, traditional harvest, nesting beach degradation, predation by feral animals, etc., that may be even more significant. Government agencies must therefore collaborate in the monitoring and management of these species if any of their respective regulations are to be effective.

Finally, the workshop participants reviewed the draft WCPFC Guidelines for the Handling of Sea Turtles. The working draft that the group discussed had been prepared by the WCPFC Secretariat based on earlier SPC guidelines, with contributions from other CCMs such as Australia, Japan and USA. The wording of that draft was often weak in the same way as the CMM itself and so edits were suggested that have been incorporated into the draft presented to SC (GN-WP-13).

In summary, while the turtle CMM is quite clear in certain areas, it remains a concern that there is excessive room for creative compliance in other areas. SC will review some aspects of this CMM, in particular the issue of turtle interaction rates, but there is still room for improvement in the definition of the desired outcomes of the CMM itself, which until resolved will complicate the evaluation of its effectiveness.

7. Conclusions

The workshop provided an informal setting in which participants from 21 CCMs could review the WCPFC CMMs for bycatch with a view to monitoring and analyzing their effectiveness. Experiences and perspectives were voiced and discussed, with participants learning from each other as much as from the tutors. Those that are responsible for scientific data collection, data management and data analysis for Pacific fisheries do so within a complex international management context. Their job can be made easier and more relevant to fisheries management if the principles, rules and desired outcomes of management measures are clear to all concerned. The workshop and this paper are a contribution to that cause.

Table 2. Participants at the workshop on Monitoring the Effectiveness of CMMs for Bycatch

Pamela Maru
Cook Islands

Netani Tavaga
Fiji

Jone Amoe
Fiji

Thomas Flores
Guam

Michael Trianni
Commonwealth of the Northern Mariana Islands

Vanessa Limatoa-Marsh
Niue

Aketa Tangaa
Kiribati

Steven Retalmai
Federated States of Micronesia

Marie Yonger
French Polynesia

Cedric Ponsonnet
French Polynesia

Budi Iskandar Prisantoso
Indonesia

Terence Amram
Nauru

Berry Muller
Republic of Marshall Islands

Kathleen Sisior
Palau

Ludwig Kumoru
Papua New Guinea

Thomas Usu
Papua New Guinea

Elaine Garvilles
Philippines

Ueta Jr. Faasili
Samoa

Toni Mulipola
Samoa

Feleti Tulafono
Tokelau

Tu'ikolongahau Halafihi
Tonga

Tupulaga Poulasi
Tuvalu

Tony Taleo
Vanuatu

Bruno Mugneret
Wallis-et-Futuna