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Inside this issue

Editor
Kenneth Ruddle
Asahigaoka-cho 7-22-511
Ashiya-shi
Hyogo-ken
Japan 659-0012
Email: mb5k-rddl@asahi-net.or.jp

Production
Fisheries Information Section
SPC, BP D5, 98848 Noumea Cedex
New Caledonia
Fax: +687 263818
Email: cfpinfo@spc.int
www.spc.int/coastfish

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Editor's note

This edition has three articles, two from Melanesia and one on Pacific Islands policies in general.

The first, "Past experiences and the refinement of Vanuatu's model for supporting community-based fisheries management," by Jason Raubani and eight co-authors, examines co-management of marine resources using a community-based approach, as a successor to the centralised and westernised management approach used in the 1990s, which was particularly inadequate for coping with ecological, historical and cultural diversity. This article reflects on the recent history of how community-based approaches to fisheries management have evolved and shifted in Vanuatu. These reflections offer lessons to Vanuatu and other Pacific Island countries as they continue with programmes aimed at supporting and strengthening community-based management of fisheries.

In the second article, "Critical reflections from fostering adaptive community-based, co-management in Solomon Islands' small-scale fisheries", Anne-Maree Schwarz and six co-authors analyse one institution's nine-year effort to improve small-scale fisheries in five regions in Solomon Islands. The authors critically reflect on their approach to diagnosing, designing, monitoring and adjusting management while promoting community-ownership of the process and outcomes.

In "Policies in harmony? Does the New Song agree with the Small-Scale Fisheries Guidelines?" Andrew Song, Philippa Cohen and Tiffany Morrison compare the visions, guiding principles, and recommendations of the SPC-facilitated "New Song" and the FAO-facilitated "Small-Scale Fisheries Guidelines", to determine if harmonised implementation of these two policies is possible. The authors conclude that, in many regards, the two policies are similar, and so the "New Song" could provide a vehicle to operationalise many, but not all, aspects of the "Small-Scale Fisheries Guidelines."

As she did for the last issue, Dr Philippa J. Cohen continues to serve as a guest editor for this edition.

Kenneth Ruddle and Philippa J. Cohen

Notes from the editorial board

Below are some additional instructions to authors regarding manuscript preparation for this Information Bulletin:

1) The entire manuscript should be double-spaced using Times New Roman font size 12.
2) Papers must be submitted with all parts complete and in the order specified, with all parts beginning on a new page.
3) Abstract: Papers must contain an abstract of a maximum of 200 words. The abstract should not contain citations.
4) Keywords: Five keywords should follow the abstract.
5) Figures, photographs and tables: Do NOT embed these items in the text. Rather, they should be separated and numbered consecutively as figures, photographs and tables and placed at the end of the text (i.e. following the References. Indicate where approximately in the text figures, photographs and tables should be placed, using the statement "Place Fig. 9 (etc.) near here", and highlight in yellow.
6) Captions for figures, photographs and tables: Captions should appear on separate pages and placed in the submission immediately following the figures, photographs and tables.
7) Citations and references: Before submitting your article, be sure to verify: a) that all citations in the main text are properly shown in the References section, and b) that all items appearing in the References section appear in the text. Failure to do this causes a great waste of time for both the managing editor and the copyeditor, and may, therefore, be grounds for rejecting your paper.

In line with a worldwide trend to limit the impact of producing printed publications on the environment, SPC has decided to stop the production and distribution of printed copies of this and its other fisheries-related information bulletins. The bulletins will now be produced only in digital format and remain accessible from SPC's website at:

http://www.spc.int/coastfish/en/publications/bulletins.html

Past experiences and the refinement of Vanuatu's model for supporting community-based fisheries management

Jason Raubani,[1,4] Hampus Eriksson,[2,3] Pita Thomas Neihapi,[1,4] Rolenas Tavue Baereleo,[1,4] Moses Amos,[4] Kalo Pakoa,[1] Sompert Gereva,[1] Graham Nimoho[4] and Neil Andrew[2,3]

Abstract

Co-management of marine resources using a community-based approach has become a central strategy in Pacific Islands to address overfishing and food security. Vanuatu has a long history of customary coastal management. Under Christianity these practices were weakened and gave way gradually to a westernised approach that focused on central management. Implementation of centralised management proved challenging given the strategy's weak capacity to function well across large islands inhabited by people of different origins and tribal identities. In the 1990s the Vanuatu Fisheries Department shifted towards a community-based approach to managing fisheries, and this remains a key strategy for coastal fisheries in Vanuatu, and since then multiple initiatives have been implemented under it. The recent history of community-based approaches provides an opportunity to reflect on past experiences so that the process of co-managing fisheries resources in Vanuatu can evolve, and so that the Vanuatu Fisheries Department can be a suitable co-management partner for modern purposes. Lessons derived from this exercise are relevant to other fishery agencies and organisations involved with community-based fishery management approaches in the Pacific.

Introduction

Coastal fisheries play a critical role in food security and subsistence in Pacific Island nations. Regional analyses paint a worrying picture of the future for coastal fisheries and their ability to feed people in the Pacific, unless there is significant improvement in management and productivity (Bell et al. 2009, 2016). To realise their full potential, fisheries management must be tailored to the realities of Pacific Island countries. Govan (2014) provides three compelling arguments for why, in some contexts, top–down centralised management models need re-thinking: 1) regulation radiating from central management agencies are unlikely to function well across countries with small isolated populations living in remote locations; 2) government agencies have a weak capacity for management and enforcement under these geographical realities; and 3) there is often a strong local foundation for governance and community rights, where local institutions have evolved to suit local conditions. Governance models that build on customary management, local practices that regulate use, and access and transfer of resources appear best suited to some Pacific Island contexts (Ruddle 1998; Cinner and Aswani 2007; Jupiter et al. 2014).

These realities are now well recognised in the Pacific, and a greater level of participation through community-based fisheries management (CBFM) was, for example, articulated in the Apia Policy (SPC 2008) and is a central theme in the "Melanesian Spearhead Group roadmap for inshore fisheries management and sustainable development" (Melanesian Spearhead Group 2015). In March 2015, this direction for the management of coastal fisheries in the Pacific was further strengthened through a planning meeting with regional Pacific stakeholders and governments. The meeting output, "A new song for coastal fisheries: Pathways to change", articulates the dynamic requirements of management throughout the region, focusing on co-management as a key strategy for achieving coastal fisheries management objectives (SPC 2015). This regional policy direction sends a powerful message about where the management strategy is heading at the regional level. However, higher-level policy often does not provide enough detail for effective translation into deployment of resources for implementation and management actions at the country level. Therein resides a great challenge for countries' fishery management agencies and communities in the implementation of decentralised co-management regimes.

[1] Vanuatu Fisheries Department, PMB 9045, Port Vila, Vanuatu.
[2] WorldFish, PO Box 438, Honiara, Solomon Islands
[3] Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, NSW 2522, Australia
[4] Pacific Community, BP D5, 98848 Noumea, New Caledonia

In Vanuatu, traditional tenure and customary law have provided the historical structure for regulating resource use and access. With increased western influence and cultural penetration of the early missionaries, customary beliefs became eroded, and fisheries management gradually transformed into a more centralised regime. Many communities retained, until recently, some of their customary laws during this transitional period (Hickey 2006; Johannes 2002). In 1980, a newly independent Vanuatu re-enforced centralised management by enacting the Fisheries Act as the supreme law for the conservation, management and development of its fisheries resources. Under the act, policy formulation, implementation, enforcement and conservation were the responsibility of the state. Over time, the three shortcomings noted above became increasingly evident and, as a response, the focus of the Vanuatu Fisheries Department (VFD) gradually shifted towards supporting community-based approaches to fishery management (Johannes 1998; Léopold et al. 2013a, b).

Within the broad decentralised management narrative are many complexities associated with how it may evolve and what may be required to enable the co-management process (Berkes 2006; Govan 2009). The ability of communities to revitalise ownership and authority of management rely on internal properties such as strong community structure and legitimacy, and external properties such as clear boundaries (Abernethy et al. 2014; Ostrom 2007). Through customary law these properties appear favourable in Vanuatu (Johannes 1998). However, communities may not be able to achieve ownership and authority where 1) natural resources are highly contested, 2) traditional tenure has eroded, and 3) modernisation is encroaching. Implementation must, therefore, be attuned to context and sensitive to community conditions beyond technical advice and structural support that VFD and other management partners can offer.

Since the 1990s, various forms of CBFM have been supported and practiced in Vanuatu, and have built on community cooperation with VFD and non-governmental organisations (NGOs). This long history offers an opportunity to learn from two decades of projects and to evaluate challenges and opportunities to adjust VFD's engagement models as CBFM advances. Tavue Baereleo et al. (2016) touched on the historical context of CBFM in Vanuatu, and summarised its present-day application. Here, we examine community emphasis and engagement processes in past projects to complement more technical reports on rules and outcomes (e.g. Dumas et al. 2010, 2012; Léopold et al. 2013a, b), and in-depth narratives on traditional management practices (e.g. Hickey 2006), so that lessons can be drawn for how VFD and other partners can better engage with CBFM. The objectives of this article are to:

- review the history of recent past coastal fisheries projects that have supported community fishery management; and
- synthesise insights for VFD to support future CBFM in Vanuatu.

Methodology

This article draws on policy documentation, legislation, project reports and peer-reviewed articles to identify themes in the evolution of CBRM in Vanuatu. Written materials were obtained from VFD and the public domain. Although every effort has been made to paint a complete picture of recent projects, some documentation may have been overlooked. This article also draws on output from the most recent public consultations concerning fishery and mangrove management held by VFD in 2013–2014.

Review of recent coastal fisheries projects and support for CBFM

Twenty-five projects related to coastal fisheries in Vanuatu between 1986 and 2014 were identified (Table 1). Of these projects, 16 focused on technical support, capacity building and/or resource assessments.[1] A further nine projects were oriented towards working with communities on single-species conservation, or specifically ecosystems management. From these we identified seven projects or initiatives that were particularly important in shaping today's approach towards supporting communities, in providing lessons for engagement, and influencing how VFD works with CBFM.

European Micro Project

The engagement of community-based fisheries under VFD can be traced to 1986 through a micro-project funded by the European Union. This project was implemented through a rigid top–down approach, initiated jointly by the European Department of Fisheries under the Lomé Convention, to which Vanuatu is a signatory. The project sought to increase local employment opportunities from fisheries resources, engage with 100 villages and establish 70 individual fishing enterprises. These enterprises employed around 500 fishermen throughout the archipelago. As part of the Lomé conventions, the main fisheries component was deep-sea fishing, so the target then of the VFD

[1] The following projects serve as examples: Pacific Regional Oceanic and Coastal Fisheries Development Programme, Scientific Support for the Management of Coastal and Oceanic Fisheries in the Pacific Islands region, EFITAV: Efficiency of Tabu Areas in Vanuatu, and the Coral Reef Initiative for the South Pacific.

was to build the capacity of subsistence fishermen to enable them to venture into small-scale fishing enterprises (Walelign and Russell 1989). Under the project, VFD undertook training for vessel operations and maintenance, fishing techniques and fish conservation as new approaches offered to communities. This project became a point of departure for VFD to engage communities for capacity development.

Trochus rehabilitation programme

In the early 1990s a further focus on communities in coastal fisheries management occurred through the trochus rehabilitation programme. The decline of the trochus fishery was caused by several factors, including weak management and the limited inner reef and lagoons available for fishing in relation to fishing effort (Bell and Amos 1993). Urgent measures were needed to sustain the fishery. In response, VFD instigated a trochus rehabilitation programme (Amos 1991). The project worked with communities facing depletion of trochus stock and attempted to strengthen resource management within them. From 1990 to 1993, various projects were established to cater for the rehabilitation programme. VFD led studies in collaboration with external partners such as OSRTOM Fisheries Service and South Pacific Aquaculture Development Project (SPADP) to strengthen the biological information required to improve legislation in terms of harvest size and quotas (Amos 1991). Amos (1995) reflected on the VFD's community engagement and highlighted its shortcomings in communicating and implementing fishery controls. It was concluded that there was an overemphasis on enforcing rules that were poorly explained, and insufficient effort to create space for dialogue between VFD and communities. This project demonstrated that knowledge alone was not enough to achieve management outcomes with communities, and that further capacity must be built around community engagement.

Wan Smolbag

In 1995 the renowned theatre group Wan Smolbag celebrated the "Year of the Sea Turtle" by launching a campaign to reduce turtle mortality and egg harvesting. As part of the campaign, a famous play was written, "The Plague of the Sea Turtle", to raise awareness and promote the conservation of marine turtles. The play reached schools, villages and communities throughout the country (Johannes and Hickey 2004). The play and campaign inspired villagers to set up turtle monitoring efforts by selecting a turtle monitor. The purpose of the village turtle monitor was to encourage conservation, protection of turtle nests, and help with the tagging programme instated by the South Pacific Regional Environment Programme (Johannes and Hickey 2004). Communities responded positively to the awareness programme by installing signs and notices at protected areas. Over 200 monitors in 100 coastal villages had been established by 2003 (Johannes and Hickey 2004). Wan Smolbag arranged annual meetings for capacity training and sharing among fellow monitors of constraints and lesson learned. It has become an important network for monitoring collaboration and strengthening. With increased conservation needs for other species at the village level, the turtle monitors are now also playing an important role of resource monitors to help monitor and advocate conservation for both land and sea resources in need of protection. This network has become increasingly important for local resource conversation initiatives throughout Vanuatu. A valuable lesson for VFD from the turtle monitoring programme was the opportunities that come from working in partnership with NGOs and extension services to augment VFD's capacity.

International Waters Programme

During the period 2000–2006, the International Waters Programme was active and implemented in 14 Pacific Island countries. By supporting national and community-level actions, the emphasis of the programme was to address marine and freshwater quality, habitat modification and degradation, and unsustainable use of living marine resources. In Vanuatu, the project supported initiatives promoting community conservation areas in both terrestrial and marine areas to strengthen and reinforce the customary taboos established for the protection of land crabs and mangrove habitats. Signboards publicised closures and project staff worked with the Malampa provincial tourism development officer to encourage ecotourism at the site. They worked with 16 communities in the central part of Malekula, including the two offshore islands of Uri and Uripiv. The project emphasised participatory processes for cooperative action and co-management of resources. It built its initiatives on partnerships across local and national levels and was able to evaluate these processes. The broad geographical implementation has supported a substantial lessons-learned document (Aitaro et al. 2007). In Vanuatu, the project emphasised the formation of partnerships and further capacity requirements of national agencies to lead community engagement processes.

Mangrove ecosystems for climate change adaptation and livelihoods

The mangrove ecosystems for climate change adaptation and livelihoods (MESCAL) project was implemented in Solomon Islands, Samoa, Tonga, Fiji and Vanuatu by the International Union for Conservation of Nature. The project's over-riding goal was to increase resilience to climate change for

the people of Pacific Island countries through adaptive co-management of mangroves and associated ecosystems. It was both a research and development project, the activities of which included demonstration sites, capacity building, governance systems in place for mangrove management, economics, and carbon sequestration (Waqalevy 2012). The project worked with 17 communities in Vanuatu, 16 on Malekula and 1 on Efate through a "participatory learning and action" approach. This approach enabled a more structured government engagement with communities than had been implemented in the past, building on participatory action research and the co-development of action plans for prioritised issues.

Japan International Cooperation Agency "Grace of the Sea" project

The "Grace of the Sea" project was hosted and facilitated by VFD in two phases, between 2006–2009 and 2012–2014.[2] Baseline surveys generated a substantial socioeconomic dataset of 23 coastal communities in Tafea, Malampa, Shefa provinces, along with descriptive situational analyses for multiple community resource management initiatives (Nimoho et al. 2013). From these data the project sought to identify and prioritise support for community-based coastal resource management, and worked with livelihoods and income generation activities. Livelihood initiatives developed a new design for fish aggregating devices (FADs) that could withstand cyclones, developed a fishery for a new species (diamondback squid), and conducted training in shell crafting techniques and a fish café. These activities were accompanied by initiatives on CBFM and the development of community management plans. The project further built broad capacity for fisheries monitoring, control and surveillance (MCS) by taking advantage of Part 18 of the Fisheries Act (Government of Vanuatu 2014), specifically on Authorized Officers to assist community based fisheries management. As a whole, the project's broad approach to scientific data collection, livelihood development initiatives, MCS and community engagement raised community-based management capacity and the engagement experience with VFD. It also served as an example of the breadth and diversity of prioritised actions among communities, beyond regulating the use of marine resources. Not all of these prioritised actions were within the scope of what VFD could assist with, emphasising the need for cross-sectoral partnerships for community support.

Table 1. Recent past projects that shape the community-based fisheries management model for the Vanuatu Fisheries Department.

Project	Duration	Documentation	Project scope
European Union Micro Project	1986–1989	Walelign and Russel 1989	Capacity building in the fishing and post-harvest sectors for trade and economic development across 100 villages in Vanuatu. Emphasis on community engagement and training.
Australian Centre for International Agricultural Research (ACIAR)	1988	Fletcher 1988	Ecological and biological assessment of coconut crab in Vanuatu to consider future management measures.
South Pacific Aquaculture Development Project	1990–1991	Amos 1991	Trochus stock rehabilitation with hatchery-reared juveniles in partnership with resource-owning communities as a tool for management of wild fishery.
RAMCID Vanuatu Fisheries (ACIAR)	1996	RAMCID 1996	Technical assessment and review of Vanuatu Fisheries Department initiatives.
The socioeconomic assessment of the native forest preservation proposal in Vanuatu: Implications of forestry management (ACIAR)	1997	Tacconi and Bennett 1997	Developing an approach to the Convention of Biodiversity by involving local communities, provincial government and national governments in establishing protected areas and developing a framework for local communities.
Local and Indigenous Knowledge System (LINKS) project	2001	Johannes and Hickey 2004	A review investigating traditional and indigenous resource management techniques that enable communities to survive and sustain themselves in a changing world while maintaining environmental integrity.
International Waters Project (IWP)	2002–2008	Hickey 2006	Focus of IWP project in Vanuatu on working in collaboration with communities to promote the management of land crabs by strengthening traditional resource management through forms of taboos. IWP aimed to increase community involvement and responsibility for community-based resource management and conservation by traditional resource management.

[2] See: http://fisheries-gos.gov.vu

Table 1. continued

Project	Duration	Documentation	Project scope
PROCFish/c/CoFish (European Union)	2003	Friedman et al. 2003	First comprehensive multi-country comparative assessment (finfish, invertebrates and socioeconomics) using identical methodologies at each site and build reef fisheries resource and indicators profile to provide information for management planning and update national and regional database.
Projet d'Organisation des Producteurs Agricoles pour la Commercialisation Associative II (POPACA II)	2003	Hickey and Firiam 2004	Extend geographical range of small-scale commercial and/or artisanal fishing project to increase the supply of fish to satisfy the high market demand and increase economic benefits of commercial and artisanal fishery in the Shepherd Outer Islands (Emae, Tongoariki, Buninga, Mataso, Makira).
ACIAR	2004	Lindner 2004	Impact assessment of research on the biology and management of coconut crabs on Vanuatu.
Reef Check	2004	Hill 2004	Community capacity building for Efate communities on coral reef health and aquarium species monitoring for aquarium trade sector management and resource management.
Coral Garden Project (Mac Arthur Foundation)	2004–2007	Foundation of the Peoples of the South Pacific (FSPI) 2007	Strengthen the capacity of key institutions such as the local government, NGOs and local communities in Vanuatu and support community-based coastal management and sustainable livelihood.
University of Iceland Community Fisheries Management final project	2006	Raubani 2006	Desktop review of the community fisheries management system in Vanuatu using the Arnason design principle. Emphasis on finding practical ways to improve the current systems to be more efficient, strong and sustainable.
PROCFish/c/Cofish (European Union)	2008	Pakoa et al. 2008	Underwater assessment to collect baseline information to describe the status of the resources, especially the trochus and sea cucumber fisheries and provide recommendations for management.
Millennium Challenge Account	2009	Raubani and Gereva 2009	Technical report investigating the level of impact of damage by the development the newly implemented marina located at the Undine Bay area.
Coral Reef Initiative in the South Pacific (CRISP) project	2009	Dumas et al. 2009	Community capacity building done in Emau communities to improve monitoring capacity and provide relevant information for their reef resource management.
CRISP project	2009–2010	Dumas et al. 2010	Technical evaluation of the result of village-based management of invertebrates on Emau Island.
Mangrove Ecosystems for Climate Change Adaptation and Livelihoods	2010–2014	Waqalevy 2012	Research and a development initiative that included community demonstrations sites and capacity building activities for mangrove management.
Global Environment Facility, Small Grants Programme, United Nations Development Programme	2011	Raubani 2011	Capacity training for communities and resource owners on simple coconut crab stock assessment and monitoring surveying methodology.
Bislama project	2011–2012	Ham et al. 2012	Resource assessment project determining the stock of sea cucumber throughout Vanuatu through updated survey technology and formulating a five-year management plan.
Efficiency of Tabu Areas in Vanuatu (EFITAV) project	2012	Dumas et al. 2012	Technical study assessing the capacity of tabu areas through comparative stock assessment of inside vs outside of tabu areas, and determining their effectiveness for sound decision-making on resource management at the community level.
Gestion traditionnelle (GESTRAD) project	2013	Kaltavara et al. 2013	Study to update policy on community-based fisheries management by assessing existing management and capacity at sites throughout Vanuatu.

Table 1. continued

Project	Duration	Documentation	Project scope
Vanuatu Fisheries Department, French Research Institute for Development, and the French National Center for Scientific Research. Funded by the French Ministry of Foreign Affairs (Pacific Funds) and the Government of Vanuatu (Vanuatu Fisheries Department)	2013	Léopold et al. 2013b	Study that examined the effectiveness of past community-based fisheries management and proposed practical management regulations based on community and national governance capacities.
Grace of the Sea Project (Japan International Cooperation Agency)	2006–2009 (Phase 1) 2012–214 (Phase 2)	Nimoho et al. 2013	Community capacity building project integrating initiatives on management and livelihoods.
European Development Funds 10 (EDF 10)	2014	Arthur 2014	Review report identifying gaps and barriers hindering Vanuatu's fisheries sector development and service delivery to the public sector.
Strengthening Coastal and Marine Resources Management in the Coral Triangle of the Pacific project - Phase 2 (Asian Development Bank)	2014	Dumas et al. 2014	Community technical capacity building for crown-of-thorns starfish clean-up procedures at Luganville on Santo.

Stakeholder consultations

Since 2013, VFD has completed a series of stakeholder consultations. These are seen as opportunities for VFD to inform the public about their activities and the services available to communities. The consultations were also occasions in which stakeholders shared their views and contributed to influencing VFD's model of engagement. Consultations included key stakeholders, such as community leaders, area secretaries, councillors, the provincial government and government extension officers. The consultations provided rich sources of information from communities regarding CBFM. Several types of consultations have been carried out as part of different initiatives. For example, from May to July 2010 mangrove use and management consultations were held in six provinces. At these consultations, key mangroves areas that needed to be managed and protected were identified, and mechanisms for management and government support considered in partnership with communities. During 2013–2014, fisheries regulation consultations were carried out in six provinces. The consultations highlighted varying priorities, depending on the local major fishery target species. However, the outcomes were similar in that communities wanted to see the government help them manage their fishery resources.

A synthesis of insights for supporting future CBFM in Vanuatu

Current fisheries management in Vanuatu is based on a mixture of customary and traditional knowledge, and contemporary western concepts. CBFM in Vanuatu has its roots in the lessons learned from community interactions during the rehabilitation project for the trochus fishery during the late 1980s, in which VFD provided technical support to communities (Amos 1991, 1995). Johannes (1998) noted that VFD "catalysed a striking upsurge in tradition-based marine resource management" in villages during the early 1990s, building on the resourcefulness of communities and strong customary marine tenure. Hickey and Johannes (2002) further noted that "since 1993 the Department [VFD] began to focus less on fisheries development and more on fisheries extension work".

Supporting communities to govern resource use through CBFM continues to evolve in Vanuatu and is characterised by strong engagement by VFD. It is notable, however, that despite the fact that CBFM is a core model for coastal fisheries management at VFD, most CBFM programmes and activities are dependent on donor funding (Léopold et al. 2013b).

The projects identified have worked in partnership with more than 50 communities in the Shefa, Tafea,

Malampa and Sanma provinces. They have been delivered in partnership between regional agencies (e.g. Foundation of the Peoples of the South Pacific, Pacific Community), research organisations (e.g. French Research Institute for Development, French Research Institute for Exploitation of the Sea), NGOs (e.g. Wan Smolbag), and other Vanuatu state agencies (e.g. the Department of Environmental Protection and Conservation). The projects have built capacity and support networks for community-based approaches to resource management and conservation. The history of these projects contributes to shaping today's coastal fishery management model with VFD. Each of the past projects in Vanuatu that have focused on community capacity building and resource management have generated insights for community-based approaches, both for VFD and NGOs as management partners (e.g. Aitaro et al. 2007; Amos 1995; Hickey and Johannes 2002; Johannes 1998; Léopold et al. 2013a; Nimoho et al. 2013). Building on this history, four broad thematic areas may be identified as opportunities to further evolve the model: sensitivity to community context, documenting and analysing the CBFM process, seeking partnerships, and a deliberate emphasis on gender.

Sensitivity to community context

In many modern Pacific Island settings, as the human population increases, migrates, urbanises and competes for declining resources, boundaries delimiting the extent of community managed areas are unclear or contested (e.g. Sulu et al. 2015). Clear boundaries are widely cited as being an important precondition for self-governance of natural resources (Ostrom 2007). The management process must be sensitive to these local conditions, as they have the potential to influence CBFM interest, uptake and success. In some locations, CBFM might not be the suitable approach because overlapping use of resources and the social conditions under which people live makes community cooperation difficult to sustain. Even where CBFM appears to be an appropriate model, it might not achieve all the desired or prioritised community objectives (Jupiter et al. 2014; Léopold et al. 2013b). With the relatively long histo ry of CBFM in Vanuatu it is possible, at least in theory, that the more organised communities have already been identified and supported. In addition, some communities have a long history of engagement by NGOs or projects and this influences the point of departure for change, as well as offering an opportunity to form coalitions and networks. A community's history of external engagement can influence expectations. For example, past activities may not have lasted beyond a project's lifetime so there is a cynical view of external management partnerships (see Léopold et al. 2013a). An evolving issue is, therefore, how to be sensitive to such histories in the engagement approach, and how to adjust the model when the process does not start with a 'clean slate' (Tavue Baereleo et al. 2016).

Documenting and analysing the CBFM process

Outcomes from CBFM initiatives are experienced differently among and within communities (Maliao et al. 2009; Pomeroy et al. 1997). Variable outcomes from CBFM can, at least in part, be explained by social process and the complex realities of governing common resources affected by social norms, perceptions, and historical dynamics of resource control (Blythe et al. 2017). In order to evaluate and better refine the community engagement model in Vanuatu, improvement must be made in the documenting process (e.g. representation, gender, leadership, legitimacy). It is important to understand the needs and capacities that communities harbour within themselves, to generate a better qualitative picture of the management process and role that either VFD or NGOs can realistically play as partners in marine resource management. Research has shown that CBFM outcomes often depend on internal community processes, not just the external support a community receives (e.g. Abernethy et al. 2014; Steenbergen and Visser 2016). For example, leadership has been highlighted as a critical factor influencing fisheries management outcomes more broadly (Gutierrez et al. 2011). The proposition, as VFD and other CBFM partners in Vanuatu move forward with participatory community engagement, is to strive for further qualitative documentation that helps track and understand the change process and what influences perceived outcomes in communities. Interviews with community members and systematic recording of observations through trip reports complements more quantitative information on community attributes and fisher catch monitoring. This type of information is valuable to adjust the VFD engagement model to lessons learned from different partner communities.

Seeking partnerships

The community support context is broader than just regulating use of marine resources (Gillett et al. 2008; Pomeroy et al. 1997), and a community diagnosis process can identify and prioritise issues outside fisheries management (Eriksson et al. 2016). For example, communities in Solomon Islands prioritise thematic areas such as habitat restoration, alternatives to firewood for fuel, and development of information material for awareness alongside larger resource governance issues (Sulu et al. 2015). It is unreasonable to expect VFD or individual NGOs to have the range of technical capacities needed to address all concerns or community-prioritised activities. For this purpose, broader partnerships that cover the full breath of prioritised

issues and concerns are needed. There are several international and national NGOs operating in Vanuatu. This environment offers opportunities for innovative partnerships to support communities across several sectors. The JICA project serves as an example because it did not take a narrow interpretation of the community-support approach to managing fisheries, but instead worked on livelihood enhancement and small-scale fishery innovation as prioritised by communities (Nimoho et al. 2013). Community support staff at national agencies have a role in facilitating the co-management process and delivering services (Govan 2013). However, staff turnover and inadequate operational resources for coastal fishery extension services is a common theme in the region (Govan 2013, 2015). Seeking partnerships offers scope for adding further capacity to VFD's work through networks of agencies and NGOs active in the field of CBFM. Through such partnerships there are also opportunities to share lessons learned across the multiple cases where different organisations are working.

A deliberate emphasis on gender

Social inequalities associated with gender affect access to resources, networks and assets, and this gender gap differentially influences the opportunities for development and well-being of men and women (Kantor et al. 2015). For example, a Solomon Islands case study found that women's adaptive capacity to maintain well-being was lower than that of men because they experienced reduced access to support and information, lower participation in community governance and social organisation, and learning and experimenting (Cohen et al. 2016). Women and men also often use different parts of the coastal seascape, owing to their differentiated access to resources and gender norms (Fröcklin et al. 2014). In Vanuatu, women spend more time on the reefs gleaning and fishing compared to men (Waqalevy 2012), exemplifying the importance of the deliberate inclusion of women in the management of those environments. A critical question in this context is whether the gendered seascape use is reflected in the way women participate in decision-making and are impacted by management as CBFM evolves at the local level. In past CBFM projects the deliberate representation of women in decision-making for management, and documentation of their views, has been limited. Anecdotally, it is often seen as more difficult to work with women in communities because they are typically regarded as cooks, whereas men attend decision-making workshops and meetings. These norms perpetuate women's limited participation in communal decision-making. Approaches that seek to catalyse critical questioning of norms and actions in response to them must also be sensitive, so as not to exacerbate them (Cohen et al. 2016). Seeking partnership with established women's groups and networks in the village, such as the female resource monitors, the committees against violence against women (CAVAW) network, and the government Department of Women's Affairs can be a way in which VFD and partners can be more deliberate about gender, and involve women in rural areas in discussions around resource use and management (Vunisea 2008).

Conclusions

The rich history of CBFM in Vanuatu continues to be written in ways that are unique to the country. Lessons from more than 30 years of projects have coalesced into a national model for CBFM implementation. Léopold et al. (2013b) and others caution against simple prescriptions for CBFM and inflated optimism for long-term benefits. These authors also note the continuing dependence of external agents for durable impacts. CBFM is no panacea for sustainable coastal fisheries in Vanuatu. Limited government resources, geographical isolation, and the nation's diverse ethnic and cultural history, mean that the challenge to improve the Vanuatu model for CBFM will remain an important research and policy area. Government agencies will need to continue to evolve to more effectively play their part in this future.

Acknowledgements

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Critical reflections from fostering adaptive community-based, co-management in Solomon Islands' small-scale fisheries

Anne-Maree Schwarz,[1] Philippa J. Cohen,[1,2] Delvene Boso,[1] Christain Ramofafia,[3] Timothy Alexander,[1,4] Gregory Bennett[1] and Neil Andrew[1]*

Abstract

Adaptive co-management approaches have been at the core of attempts to apply resilience principles to small-scale fisheries. Although recommendations of what should be done to promote resilience are commonplace, insights from practice are rare. The authors provide a critical analysis of WorldFish's effort to improve the resilience of small-scale fisheries, particularly experiences with facilitating, implementing and sustaining a collaborative form of management referred to as community-based resource management (CBRM) in five regions in Solomon Islands over nine years. A participatory diagnosis and adaptive management framework was applied to foster the emergence of CBRM in intense community engagements. The authors reflect on the adoption of resilience principles in their practice through: 1) defining a fishery to fit local governance contexts; 2) drawing on multiple knowledge sources to guide local rules to protect the ecological, social and other functions of small-scale fisheries; 3) fostering local ownership and participation, while also brokering external links for learning; 4) developing monitoring that is meaningful for communities; and 5) promoting inclusive forms of governance that are responsive to change. Results were fair at best because adaptive new, negotiated forms of management were sustained in only two regions. However, insights led to changes in WorldFish's practice, and demonstrate that embedding resilience principles (such as encouraging learning, fostering adaptive systems, and thinking and promoting links across scales of governance) requires capacity among all participants to reflect, adapt and adjust.

Introduction

Fishers engaged in small-scale fisheries (SSFs) are vulnerable to the compounding effects of stresses within fishery systems (e.g. stock depletion, increased competition) as well as environmental and social shocks emanating from outside their domain (e.g. climatic variation, global trade, price fluctuations). This complexity is challenging for managers to ensure SSF can maintain the delivery of benefits to those reliant on them. To continue functioning as a livelihood "safety net" for the rural poor, SSFs must better absorb shocks, and adapt to change. However, resilience theory is difficult to translate into practical guidance for managers attempting to sustain and improve small-scale fisheries (Béné et al. 2014).

Decentralised adaptive co-management has long been promoted as consistent with principles of resilience (Berkes et al. 2001; Biggs et al. 2015), and it is increasingly common in practice as a strategy to preserve social and economic benefits from SSFs (Cinner et al. 2012; Evans et al. 2011). Adaptive co-management seeks to promote management that is responsive and specific to local conditions. It often devolves some governance responsibility to resource users, and ultimately seeks to share governing responsibilities between resource users and other (often state) stakeholders. A global review of cases of adaptive co-management suggests that outcomes are generally more positive than negative. Positive outcomes reported included improved inclusion and representation in governance processes, increased capacity to control or influence decisions, higher rates of compliance with management rules, and quantitative increases in household income, well-being, resource status and fishery yield (Evans et al. 2011). However, it is also important to recognise that it is the successful projects that are more likely to be evaluated and reported in the literature, whereas projects that fail or are discontinued are rarely documented (Evans et

[1] WorldFish, PO Box 438, Honiara, Solomon Islands.
[2] ARC Centre of Excellence for Coral Reef Studies, James Cook University, Townsville, Queensland, Australia
[3] The Ministry of Fisheries and Marine Resources, P.O. Box G13, Honiara, Solomon Islands
[4] The Ministry of Fisheries and Marine Resources, P.O. Box G13, Honiara, Solomon Islands
[*] Corresponding author: Anne-Maree Schwarz, c/o The Ministry of Fisheries and Marine Resources, PO Box G13, Honiara, Solomon Islands. Email: schwarzamj@outlook.com

al. 2011). In the Pacific, there are enthusiastic reports of adaptive co-management (e.g. Bartlett et al. 2009; Govan et al 2011; Jupiter et al. 2014), but critical reflections about approaches applied, and the logic behind them, are much more difficult to come by.

To overcome this gap, we offer a critical account of our experience in facilitating a form of adaptive co-management, commonly referred to as community-based resource management (CBRM) (WorldFish 2013), a model particularly common throughout the Pacific Islands region (Govan 2009). In this paper we describe implementation of CBRM for SSF in five coastal regions of Solomon Islands over nine years. A participatory diagnosis and adaptive management (PDAM) framework designed for developing world contexts (Andrew et al. 2007; Evans and Andrew 2009) was used to order the different phases of implementation. The framework emphasises the need for particular attention to factors arising from outside the fishery domain that may influence management performance and the livelihoods of fishery stakeholders; and the local, cultural and national institutions (i.e. established sets of rules) that govern fisheries. The framework identifies distinct opportunities for learning, reflection and adjustment in three main stages of implementation: 1) participatory diagnosis, 2) defining the management constituency, and 3) implementation of management and monitoring.

The research questions addressed were how, and in what ways, does the use of participatory approaches, structured by the PDAM framework, foster the emergence of CBRM? The research was addressed through a comprehensive objective of promoting the emergence of CBRM. To align with resilience principles, we organised this into five specific objectives: 1) define the fishery, management constituency and management solutions to "fit" the local governance context; 2) draw on multiple knowledge sources to guide locally designed rules that would protect the ecological and social function of the small-scale fishery; 3) foster local ownership and participation while simultaneously presenting ourselves as a broker to external knowledge, expertise, resources and links to higher-level governing support; 4) foster monitoring that was meaningful to communities, and that promoted reflection and informed adjustments to management; and 5) promote governance structures that were inclusive and responsive to change. The paper is structured around each of these objectives, and concludes by setting findings within the literature on adaptive co-management, and discussing the practical implications for governing SSF for resilience in Solomon Islands.

Background to the study region

In Solomon Islands more than 70% of people rely heavily on subsistence fishing, yet a shortfall of fish looms as a long-term threat (Bell et al. 2009). Historically, governments have had little influence over rural fisheries (Lane 2006), and this gap has been filled by non-governmental organisations (NGOs) that promote and directly support various forms of adaptive co-management (Cohen et al. 2012). However, substantial regional policy, described within and built on by SPC (2014), and national policy (the Coral Triangle National Plan of Action, the Fisheries

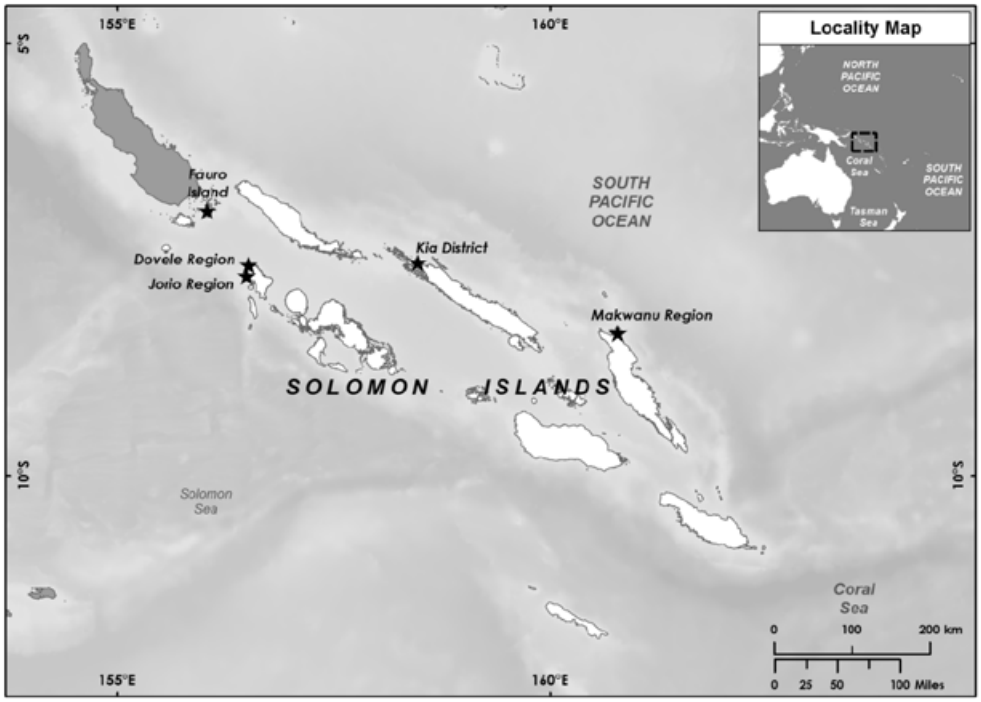

Figure 1. Five regions within Solomon Islands where the project was implemented.

Table 1. Details of the regions with which the authors engaged to support adaptive co-management.

Region	Province	No. of villages	No. of households (approx.)
Kia	Isabel	14	280
Jorio	Western	5	350
Dovele	Western	3	240
Fauro Island	Western	1	300
Makwanu	Malaita	5	80

Management Act 2015, the Ministry of Fisheries and Marine Resources Strategy 2017) in the last decade, now support community-based approaches as a principle strategy for SSF management, marine conservation and climate change. In an effort to synthesise lessons to inform policy and practice, this article reflects on applied practice and outcomes in five areas in Solomon Islands (Fig. 1) where WorldFish was involved in facilitating CBRM.

Each region comprised multiple villages of between 80 and 350 households (Table 1) that were close together and had historical social alliances. In common with other coastal Solomon Islands communities, all communities rely heavily on coastal fisheries and agriculture, within a predominantly subsistence economy (Clarke 2007; GSI 2011). Each region has limited livelihood alternatives, in part, owing to poor access to provincial and national markets. All retain customary land and marine tenure, and leadership roles are played by both traditional and church leaders.

Methods

From an office based in Solomon Islands, WorldFish implements a project-funded programme of collaborative SSF management with communities that have requested assistance, either directly through their provincial government or through one of the responsible ministries: the Ministry of Fisheries and Marine Resources (MFMR) or the Ministry for Environment, Climate Change, Disaster Management and Meteorology (MECDM). In 2005, work began to establish SSF management within Kia District, and in 2006, in one community in the Jorio region (Fig. 2). Engagement in the three additional regions started in 2008 (Fig. 2 and Table 1).

Here, all cases where WorldFish had worked between 2005 and 2008 are examined to benefit from the in-depth knowledge created over a nine-year involvement.

This study is descriptive, reflecting the direct, long-term engagement of the authors, and draws on two main sources of data. The first is published work (e.g. Abernethy et al. 2014; Cohen and Alexander 2014; Cohen and Steenberger 2015; Cohen et al. 2013; Schwartz et al. 2011), which employed methods such as semi-structured interviews, key informant interviews and focus group discussions (FGDs) described in detail in the articles from which results are cited. The second source draws extensively on project documentation from 2005 to 2014 as primary qualitative data. These project documents include field reports containing transcripts of FGDs, notes from participant observations, meeting minutes, key informant interviews, and informal interviews collected from different social groups (i.e. gender, age, livelihood type).

Results and discussion

Participatory diagnosis

Subsequent to receiving and responding to community requests for assistance, a "scoping" phase commenced (Orirana et al. 2016; WorldFish 2013). This provided an opportunity to determine if there was broad consensus among the community to proceed with CBRM and to develop a mutual understanding between community leaders and WorldFish about the nature of the collaboration, and the roles and responsibilities of each party. Once this initial agreement had been reached, the "diagnosis" phase commenced (Fig. 2)

The diagnosis phase is important in order to understand the fishery from ecological, social and political perspectives (Lebel et al. 2006; Nadasdy 2007). Diagnosis involved facilitating community discussion on a definition (Ostrom 2007, 2009) of their fishery, with a particular emphasis on eliciting perspectives of men, women and youth. FGDs and key informant interviews were used to draw out further local knowledge of ecological, social and governance aspects of the fishery. Interviews with fishers were used to understand catch composition, average catch size, perceptions of harvesting trends, and to collate local ecological knowledge (e.g. fish spawning periodicity and locations) with the intent that this knowledge would improve "fit" in the design of management measures. FGDs and

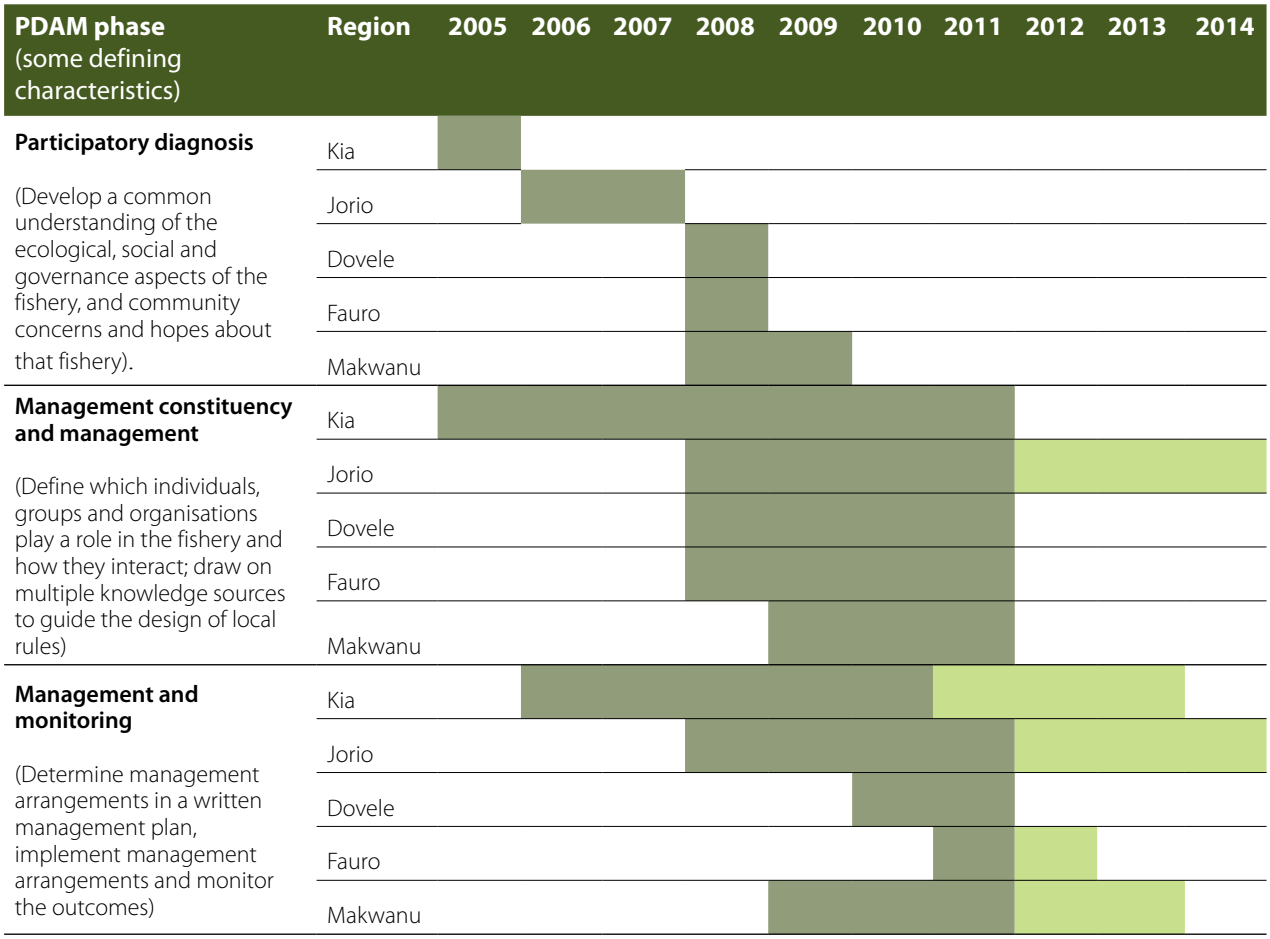

Figure 2. Timeline of implementation of the three major phases of the participatory diagnosis and adaptive management framework through periods of direct and regular engagement (dark green) and lower level engagement (light green) including through the partners of the Solomon Islands Locally Managed Marine Area Network.

interviews underwent preliminary analysis and were then presented back to communities in a public meeting. Detailed discussions regarding customary tenure rights and boundaries were conducted with committee members and community leaders; the objective of this was to determine physical and social boundaries appropriate for management. Household surveys were also conducted as part of the diagnosis phase.

Outcomes of the diagnosis phase

The diagnosis phase uncovered a range of issues in defining a fishery. In Kia, beche-de-mer was (and had been for decades) an important source of income in an otherwise largely subsistence economy; the project was designed initially to tackle the management of this fishery. The initial fishery definition, documented in the preamble to the community management plan, reflected this focus:

> *The sea cucumber fishery in Kia community is based on the sea cucumber resource and the people of Kia community who harvest it. The Kia community and the marine resources it controls extends … [geographic details confidential] ... This community is unified under a House of Chiefs which is responsible for its wellbeing and for managing the fishery.*

Within six months of the diagnosis in Kia, a national export ban on beche-de-mer was imposed and the fishery ceased to exist.[5] In response, the community sought to broaden the focus of management, and, therefore, revise their fishery definition to include fish and invertebrates, which are important for food and income. Whereas the focal taxa changed, the identity of the broader fishery in terms of habitats, resource users and governance institutions did not.

[5] The ban was lifted temporarily following an April 2007 earthquake and tsunami, but was re-instated one year later. In recent years Solomon Islands has alternated between bans and an open fishery.

Experience in Kia illustrated the tradeoffs between diagnosing and defining a fishery for local legitimacy and management achievability (i.e. in this case the sea cucumber fishery) on the one hand, with a definition that accounted for "externalities", or factors operating outside the local level (e.g. a national export ban on the fishery of interest) on the other. The PDAM framework suggests that *ideally*, management should account and prepare for these externalities (Andrew et al. 2007), but it was found that at the local level, at the time of management design, they can appear to be fairly intangible and unforeseeable. In the other regions, fisheries were defined in terms of all the marine resources that communities recognised as important, but management tended to concentrate on taxa or habitats most commonly harvested. For example, in Makwanu 23 fish and 6 invertebrate taxa were named as part of the fishery, but subsequent management focused on rabbitfish (Siganidae) in particular, and finfish in general, because of their importance for food and income.

Across the regions, concerns about declines in size and abundance of resources were ubiquitous, and informal and formal interviews showed perceptions of causes, such as local increases in human population, habitat destruction, improved gear efficiency, lack of respect for community rules, lack of alternative livelihood opportunities, and/or an increasing demand for financial resources. These causes were taken into account in the advice that was provided to communities. As a result, management responses were designed, as much as was feasible, to address particular threats and their causes.

The participatory diagnosis phase, as originally conceived and executed, required a significant investment of time and resources, both from the facilitators and the community. As the number of communities that facilitators worked in grew, it was clear that data collection via household surveys was relatively expensive, time consuming, and unsustainable. Surveys were valuable for academic research purposes (e.g. Schwarz et al. 2011) but had little value in directly informing more immediate management design and adaptation, and were a poor tool for encouraging community "buy-in" and participation. In engagements subsequent to the five cases reported here, initial information gathering was streamlined to a series of FGDs (Orirana et al. 2016; WorldFish 2013).

Management constituency

The "management constituency" describes participants in the fishery and their interactions, and governance structures that influence management (Evans and Andrew 2009). In rural Solomon Islands, constitutionally recognised customary marine tenure and local governance structures are, arguably, more influential on SSF resource use patterns than national laws and regulations (Lane 2006). Nonetheless, at certain times, or for exported commodities (e.g. beche-de-mer), national government controls can become highly influential (Cohen et al. 2013). In the study regions, management constituencies were defined by both men and women as a combination of all or some of the following: all community members and resource owners, elected chiefs, clan chiefs, community leaders, elders and fishers. External entities (e.g. government or NGOs) were rarely included. The highest, locally relevant authority identified by communities was the district-level House of Chiefs, where, in Kia for example, infringements of community or customary rules are adjudicated and appropriate penalties imposed. In addition, offenders are publicly named in church as an active form of punishment and deterrent.

Strengths and weaknesses of the management constituency

Common themes that emerged were capacity for enforcement of adaptive co-management, and matching national government rules to the local diagnosis of the fishery. People's views on community-level capacity for enforcement varied markedly. Although respondents in all regions acknowledged that traditional enforcement mechanisms existed, in practice, compliance and enforcement were perceived as low. For example, one tribal chief reflected:

> *Before, people have a lot of respect for the chief and if he gives instruction, people will obey and follow him because they value his leadership. Now when I ask people to do something, they will not follow…. People nowadays have lost their kastom (custom) and their respect.*

Nonetheless, chiefs and spokespersons for reef-owning clans were recognised as having management responsibilities and, prior to engagement with WorldFish, they had to varying degrees asserted this authority in the implementation of customary measures (i.e. reef or mangrove closures) in four of the five regions.

In common with the findings of Sulu et al. (2015) in Malaita, Solomon Islands, there were low levels of awareness about national regulations. When we discussed rules enshrined in national legislation (e.g. bans on natural poisons or dynamite for resource harvesting), they were recognised as being important, but enforcement was identified as being problematical. As a consequence, people expressed doubts that new management measures that might be implemented via adaptive co-management

could be enforced effectively. While there was a desire to implement controls, respondents felt that local management would need support from government; a sentiment identified for community development in general by rural Solomon Islanders (Dinnen and Allen 2015).

Villagers were confident that local environmental knowledge could help to craft management solutions to fit the issues identified in diagnosis. For example, in Fauro, most fishers (men and women) felt they had a good understanding of the marine environment, and felt their knowledge was sufficient for them to manage it. Similarly, in Dovele a majority of fishers agreed on the threats to the environment and what should be done to mitigate them, including closing reefs, improving community and fisher unity, targeting deep-water fisheries, having leader and fisher discussions and seeking advice and assistance from outside institutions. When asked how other individuals or organisations could support them working toward a better future, fishers from Dovele, Fauro and Makwanu most commonly suggested externally sourced scientific information and support from an external agency to work directly within the community to support management implementation. In addition, respondents felt there was a need for the provision of equipment, new fishing techniques and better enforcement. Despite having confidence in their local knowledge, many resource users stated they were not involved in decisions about resource management. Women in particular were poorly represented. This persistent reality (e.g. Vunisea 2008) is being addressed through multiple strategies in current approaches to both fisheries and terrestrial CBRM in Solomon Islands (e.g. Schwarz et al. 2014) and is a priority of new Pacific-wide policy focused on community-based management (e.g. SPC 2014).

Strengthening the management constituency

All communities expressed a desire to have a small constituency to hold management responsibilities. In all villages (except those in Dovele), leaders decided to use an existing group rather than form a new committee. Committees included village leaders and men and women from reef-owning clans. An overarching committee was also created in Jorio and Dovele to encompass the multiple villages within those regions. Committees undertook to develop management plans, enforce and adapt management arrangements, monitor progress towards objectives, act as the point of contact for consultations with external representatives, and to share information. In follow-up research, it was found that the durability of management was strongly influenced by whether people acted as "gatekeepers" and denied access to information to others in the fishery, or "knowledge brokers" in that they shared information and generated broad and long-term support for management within the community (Abernethy et al. 2014).

In principle, any member of the community was able to participate in management decision-making through public meetings arranged by the committee or via informal feedback to committee members. This was through supporting effective committee formation and function (including financial management, meeting process, facilitation) by sourcing appropriate local training providers. Requested information was also sourced and provided, and committee members were supported to attend meetings and establish links with provincial and national governments and communities of practice (e.g. the Solomon Islands Locally Managed Marine Area, SILMMA, network; see Cohen et al., 2012). As the level of engagement and 'brokering' support by WorldFish scaled down, however, only those communities that were able to leverage relationships with another NGO partner were able to sustain those links.

Having clearly defined boundaries is recognised as an important principle for the effective governance of fisheries resources (e.g. Ostrom 1990). Despite efforts to clarify physical and associated social boundaries for management in the diagnosis phase, at various stages disputed tenure appeared to be a significant barrier to establishing or sustaining management. Similar to the findings of others (e.g. McDougall 2005) clarification and definition of the fishery boundary via tenure actually raised some disagreements and concerns about the legitimacy of existing governance structures, which communities in all regions then attempted to address through local deliberation; resolution was variable.

Management

Despite being recognised as important foundations on which to build CBRM, customary measures (e.g. restricted access through tenure, protection of sacred areas, restrictions on harvesting particular species; see Hviding 1990) may be ineffective in contemporary, competitive and intense resource-use contexts (Foale et al. 2011). In recognition of this, one objective was to help communities draw on multiple knowledge sources to guide the design of local rules that would protect the ecological and social functions of their fishery.

Consultations to determine management arrangements were the most time-consuming component of engagements. Management arrangements were initially developed in a dialogue between WorldFish facilitators and a subset of the management constituency (usually the management committee plus some expert fishers). The process to

determine appropriate rules and actions for management began by looking back at the outcomes of the participatory diagnosis phase, particularly the identified causes of problems. An ecosystem approach was encouraged through informed discussions on ecosystem processes, including habitat functions and life cycles of taxa targeted by fishers and through facilitating discussions of the social structures that influenced the fishery. This information was provided to complement local and traditional knowledge shared during the participatory diagnosis phase.

In all regions, communities historically used temporary closures or *tambus*[6] to limit access and use of certain areas. At the time of these engagements, *tambus* were used either as "storage" areas that would be opened for fundraising (e.g. Kia) or feasts (e.g. Fauro), or were implemented in response to certain events such as deaths (e.g. see Cohen and Steenbergen 2015). *Tambus* were re-established or modified as part of proposed management regimes in all five regions. Other restrictions, on fishing gear and access, were also proposed (Table 2). For example, the Makwanu region had identified that the decline in rabbitfish was due to fishers targeting spawning aggregations and the use of nets to target juveniles. Their response was to implement a permanent *tambu* on an important spawning area and place a seasonal ban on harvesting juveniles. It was typical for an initial set of possible rules and actions to be devised after one facilitated discussion, and then refined by the management committee in consultation with the wider management constituency. This process of negotiation usually took months and often amended the original proposition. In addition to rules prescribed in national fisheries regulations, three regions applied rules about habitat use and four regions banned the removal of certain species or life-history stages (Table 2).

The management planning process also involved the committee allocating responsibilities for surveillance and enforcement, including specifying penalties for infringements. For example, the management plan for Kia was enforced through customary law with backing from the House of Chiefs. The penalties for non-compliance were proposed as cash or *kastom* shell money[7] fines, and the amount was set in the management plan (e.g. Fauro) or decided on at the discretion of the chiefs, depending on the severity of the offence (e.g. Kia and Makwanu). WorldFish helped prepare written plans documenting the decisions of the committee about management goals, resource use rules, enforcement strategies, penalties for infringements, indicators of management performance and the period for evaluation and review. To support committees in raising awareness about management, short summary posters were

Table 2. Management measures articulated in management plans of the five regions.

Type of management measure	No. of management plans adopting this measure
Fishing gear (5 regions)	
Dynamite ban	4
Fish poisons ban	5
Small-mesh net ban	4
Night diving restrictions	3
Fishery targets (4 regions)	
No harvesting of juveniles	3
No targeting of spawning aggregations	1
No targeting of breeding areas	1
Habitat (3 regions)	
No removing of coral boulders	1
No removing of mangroves	3
No plastic or tins thrown in the sea	1
Spatial (5 regions)	
Rotational closures	1
Periodic closures	4
Permanent closures	2

[6] *Tambu* is analogous to the English word "taboo". It refers to a social prohibition or ban, and in this case refers to the traditional closure of a marine area to fishing.

[7] Shell money is a traditional currency used as bride wealth, compensation, and trading purposes in Melanesian societies.

prepared for public display.

Success in implementing new, negotiated forms of management measures was mixed, and there were three broad outcomes: 1) none implemented, 2) initially implemented but not sustained, or 3) implemented, modified and sustained in some form (see Cohen et al. 2013). Situations of "no implementation" (Dovele) and "initially implemented but not sustained" (Kia, Makwanu and three of the five communities in the Jorio regions) were attributed to perceived illegitimacy of the governance and rule-making processes, and distrust of community representatives involved in decision-making (Abernethy et al. 2014). In successful communities, rules-in-use differed from rules-on-paper because, for example, committees found it unrealistic to implement some rules they were initially keen on (e.g. total bans on night spearfishing) and implemented rules with more flexibility than they had originally envisaged (e.g. more frequent temporary opening of closed reefs) was required to meet social obligations (Cohen et al. 2013; Cohen and Steenbergen 2015). Only a subset of management rules (and most commonly *tambus*) were implemented continuously.

Monitoring

Monitoring is fundamental to adaptive co-management (Armitage et al. 2007) but intensive monitoring programmes and high data requirements are ill-suited to many community-based, co-management contexts. In all regions except Makwanu, training was provided on the low-intensity quantitative monitoring of invertebrates (of interest to communities) using free-diving techniques. Although underwater monitoring appeared to foster enthusiasm for management, it proved unsustainable, largely owing to the high cost and problems with the accuracy and adequacy of data (see Léopold et al. 2009). Results from quantitative data were rarely, but occasionally, utilised in making adjustments to management (Cohen and Steenbergen 2015; Abernethy et al. 2014).

Indicators are widely used in fisheries because they provide a balance between ease of implementation and reliability (e.g. Clua et al. 2005; Rice and Rochet 2005). Garcia et al. (2008) proposed categories of indicators for SSFs in developing countries: people and livelihoods, institutions and governance, natural systems, and external threats and opportunities. WorldFish, in conjunction with communities, developed locally relevant indicators for each of these categories. To illustrate the "state" (i.e. informed by resilience concepts of thresholds) of indicators WorldFish developed a simple dashboard (Fig. 3). Participatory planning sessions with communities to identify indicators, thresholds and states aimed at encouraging broader thinking about the complex linkages within a fishery.

Both the facilitation team and communities found it easier to identify indicators for "natural systems" and "institutions and governance" than for "people and livelihoods" and "external threats and opportunities". As a result, only the first two were represented in written management plans. Ecological indicators, such as catch per unit effort, were relatively easy to identify because of their direct connection to food or income, and thresholds were easy for fishers to identify using local knowledge. Governance indicators were also relatively intuitive for committees, and focused on measures of

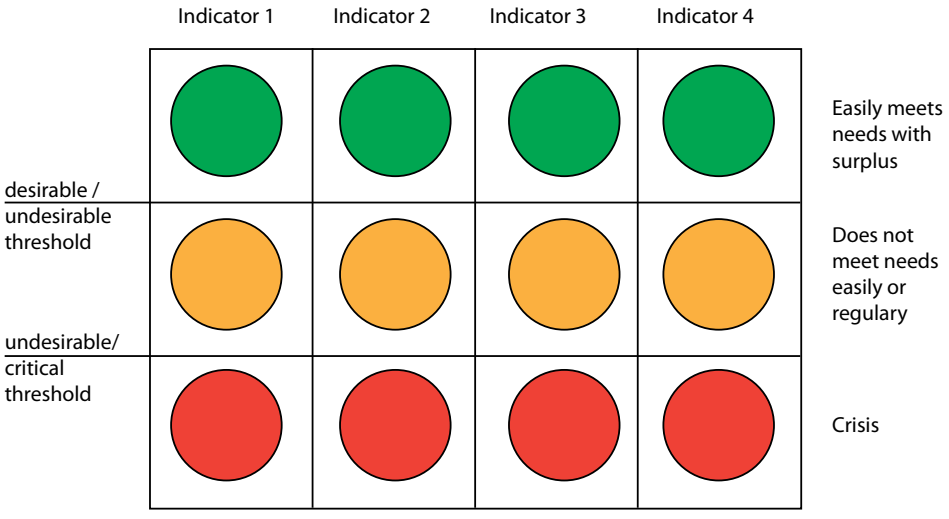

Figure 3. Dashboard illustrating the status of, and thresholds between, indicators identified by communities. This template shows three possible states — crisis (bottom row), undesirable (middle row) and desirable (top row) — and the thresholds between them.

compliance and enforcement with rules (e.g. the proportion of fishing offences receiving fines).

Thresholds reflected limits considered to be important to the community. For example, the thresholds below "undesirable" where fisheries then entered a crisis or critical state were set at the point where catches of selected species became insufficient to meet household needs, or the number of management infringements was perceived to be intolerable. In Jorio and Makwanu, the threshold above which undesirable became desirable was defined as being where catches could meet the needs of the fishers' households *and* would also enable fishers to meet social obligations and/or accrue financial capital or assets.

While the concept and process of monitoring the performance of management rules was found to be initially well-received, in most cases it was not sustained beyond project engagement. Changes to management rules that were successfully implemented were, in fact, adjusted based on local social rationale and informal fisher observations, rather than structured processes of examining thresholds and states or ecological data collected through monitoring (Cohen and Steenbergen 2015; Cohen et al 2013).

Conclusions

Reflecting global enthusiasm CBRM is proliferating in a variety of forms and for a range of objectives throughout the Pacific Islands region (Govan 2009; Jupiter et al. 2014). Policy-makers believe that strengthening SSF governance by further empowering communities as resource stewards, is a key strategy for preserving the social and economic benefits from SSFs (SPC 2014). The belief that co-management will lead to improved social and environmental outcomes is built on the assumption that fostering local stewardship and promoting legitimacy of local governors will increase the fit of management solutions and improve compliance with devised management (Jentoft et al. 1998). There is emerging evidence that this can be the case in Solomon Islands (Orirana et al. 2016). In three of the five examples presented here, disputes associated with local institutions and influences beyond the scale of the (local) fishery presented insurmountable barriers within the timeframes referred to here. The objective of determining a locally meaningful definition of the fishery can be difficult to reconcile with external factors that can rapidly and unexpectedly become highly influential (e.g. the national-level opening or closing of a fishery such as sea cucumber). Further, the very process of definition can bring to the surface disagreements and concerns about legitimacy of governance. In some cases, greater investments in integrating additional sources of knowledge, brokering cross-scale governance linkages and making adjustments to governance arrangements, may be able to address overcome these challenges, as illustrated by the efforts of community champions in Langalanga Lagoon, Solomon Islands over the last five years (Sukulu et al. 2016).

The PDAM framework provided a structure for planning and implementation. It also implicitly promoted learning phases and periodic reflection by CBRM partners to adjust engagement actions. Reflections on the performance of engagement strategies of what was working well, what was not working well, and what changes could be made (Apgar et al. 2017; Boso et al. 2010; Cohen et al. 2014; WorldFish 2013). Attention needs to be paid to fostering the necessary capacity to adjust engagement methods based on the outcomes of reflections (Apgar et al. 2015) and this requires institutional flexibility (Evans and Andrew 2009).

A global review of fisheries co-management cases, suggested that social and ecological outcomes were overall more positive than negative, yet also that projects that fail, or are discontinued, were rarely published (Evans et al. 2011). This reporting bias hinders our collective ability to improve adaptive co-management models, and gauge progress and potential towards improving resilience of SSF. Our study has highlighted that governance challenges that stall or halt local progress towards adaptive CBRM are not uncommon. While strong leadership, clear and uncontested boundaries, cross-scale links and social capital are identified as critical determinants of success (Armitage et al. 2007; Cinner et al. 2012), their absence or instability may be the norm, rather than the exception. Our research also highlights that the project modality of engagements targeted towards ideal conditions, specific sectors and localised communities will continue to be challenged by the complexity, dynamics and diversity of SSF.

The engagements with communities that we describe were relatively intense in terms of human and financial resources – this type of engagement has provided sound backing to community efforts and has allowed WorldFish to draw and disseminate substantial lessons learned on engagement, outcomes and shortcomings of CBRM. Such lessons are critical to improving outcomes and designing complementary governance and rural development solutions, but intense community-by-community engagements are slow and unlikely to reach large numbers of communities. A model has been proposed whereby relatively more effort would be invested in "core" communities (Govan et al. 2011), but simultaneously, resources are committed to ensure that other communities receive, at a minimum, information to help build more gradually active support (Abernethy et al. 2014; Orirana et al. 2016).

Despite the challenges, community-based and adaptive forms of co-management are appropriate and necessary models for governing SSFs (Parks 2011), and may also act as useful entry points for addressing deeper community development and governance concerns. An improved enabling environment for CBRM is increasingly being fostered by responsible national agencies in Solomon Islands backed up by relevant regional policies. Our experience suggests that a conscious application of resilience principles, particularly with the adoption of reflecting and learning phases across scales of governance, will ensure that increasingly relevant and effective support will continue to improve community-based approaches to SSF management.

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Policies in harmony? Does the New Song agree with the Small-Scale Fisheries Guidelines?

Andrew M. Song,[1,2] Philippa J. Cohen[1,2] and Tiffany H. Morrison[1]

Abstract

With the recent endorsement of two supra-national policies — the New Song and the Small-Scale Fisheries Guidelines — Pacific Island countries and territories are being called on to lead the process of national implementation and monitoring to improve socioeconomic and environmental conditions in coastal fisheries and fishing communities. To aid this effort, we compare these policies on three levels — visions, guiding principles and recommendations — to determine if a harmonised approach to implementing these two policies is possible. We conclude that there are many points of agreement between the two although the Small-Scale Fisheries Guidelines offer firm recommendations on human rights, whereas the New Song specifically suggests community-based approaches as a management solution, and calls strongly for inter-agency coordination. Overall, we present a view that, when accompanied by nuanced regional and national interpretation, effective implementation of the New Song could serve as a workable operationalisation of the Small-Scale Fisheries Guidelines in the Pacific.

Introduction

Two high-profile policies have recently entered the Pacific coastal fisheries governance domain. The "Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication"[3] (hereafter, the SSF Guidelines) is a global policy document adopted by the 143 member states of the Food and Agriculture Organization (FAO) of the United Nations. It came into effect in 2014 after several years of deliberation (see Box 1 for details). The other document, "A New Song for Coastal Fisheries, Pathways to Change: The Noumea Strategy"[4] (hereafter, the New Song), was formulated in 2015 by the 22 member countries of the Pacific Community (formerly known as the Secretariat of the Pacific Community, SPC) (see Box 2).

These two documents have been received with cautious but genuine optimism in the Pacific so far. Cautious because global- and regional-scale pledges in the past, such as the 2007 Vava'u Declaration, the 2008 Apia Policy, and the 2012 Melanesian Spearhead Group Roadmap had similar ambitions. Yet, despite their existence, small-scale fisheries still lag far behind offshore fisheries in terms of resourcing and political attention. At the same time, there seems to be genuine optimism, too, as regional actors and organisations are moving towards forging more coherent partnerships and commitments to assist national governments with on-the-ground implementation (pers. obs.). Hence, there is the potential that the New Song and SSF Guidelines can provide renewed impetus towards improving food security and livelihood of Pacific Islanders. These are important goals, and the SSF Guidelines and New Song are poised at the forefront of efforts to realise these goals.

Here, the opportunity and challenge lies in successfully translating global- and regional-level policy consensus into action in national and local contexts — a critical step for moving beyond the powerful rhetoric these documents offer (see Jentoft 2014). Both policies explicitly call on national governments to lead the implementation process with the support of supra-national or non-governmental organisations. Although this is typical of global-to-national diffusion of policies, more often than not, multiscalar policy implementation has been difficult to achieve (Berry and Berry 1999; Morrison 2007). For instance, it is not uncommon to find national implementation of prominent global policies to have either stalled or fallen short of the mark, resulting in little or no positive change. Commonly cited examples include the FAO Code of Conduct for Responsible Fisheries (Pitcher et al. 2009) and the UN Convention on Biological Diversity (Harrop and Pritchard 2011).

[1] Australian Research Council Centre of Excellence for Coral Reef Studies James Cook University, Townsville, Australia
[2] WorldFish, c/o ARC Centre of Excellence for Coral Reef Studies, Australia
[3] http://www.fao.org/3/a-i4356e.pdf
[4] http://www.spc.int/DigitalLibrary/Doc/FAME/Reports/Anon_2015_New_song_for_coastal_fisheries.pdf

There are many reasons why policies fail during their implementation: poor fit to national conditions, competing priorities, lack of political will, corruption, poor data, high cost of monitoring and enforcement, and inadequate skills of agency staff are all potential culprits (Angelsen et al. 2009; Peskett and Brockhaus 2009; Stavins 1997). Further, difficulties with implementation are intensified when several different scales must be involved (i.e. global, regional, national, subnational and local), and when more than one policy is being considered simultaneously for adoption (Berkes 2006; Morrison 2014). Such complexity is increasingly the norm. Pacific Island coastal fisheries are facing a similar situation given that the SSF Guidelines and the New Song have entered into an already complex and dynamic policy space. In looking ahead to their implementation, how the two policies – both similarly focused on promoting the value of small-scale fisheries – relate to each other, thus, becomes important. In other words, analysis of coherence between policies can help streamline implementation if they are found similar. If found to be different, guidance to national governments in channelling energy into prioritisation can be provided instead.

In this article, we ask "Does the New Song, as a regionally specific instrument, reinforce the commitments made in the SSF Guidelines?"; "To what extent can the New Song deliver the ambitions articulated in the global SSF Guidelines?"; and "Are there contradictions or inconsistencies that would mean implementation strategies must have approaches specific to one or the other policy?".

This paper describes the results of a three-tiered comparison of the contents of these two policies; first comparing the visions (what they aim to achieve), second, the guiding principles or approaches (the manner in which they propose to get there), and last, the activities and strategies they recommend for implementation (what will be done). We enabled this juxtaposition through qualitative "point-for-point" reading of the two documents and coding of the relevant text. The qualitative data analysis program NVivo 11 was used to manage the content being analysed and facilitate comparisons of common themes.

Box 1. Development of the Small-Scale Fisheries Guidelines

The SSF Guidelines were several years in the making. A watershed event in 2008 in Bangkok coorganized by FAO and the Thai government, with support from the Southeast Asian Fisheries Development Center (SEAFDEC) and WorldFish, galvanised the need for an international instrument to guide small-scale fisheries towards sustainable development, consistent with a human rights-based approach (see Allison 2011). Led by the FAO Committee on Fisheries (COFI), the ensuing years were devoted to consulting stakeholders, including governments, regional bodies, civil society and the academic community as well as fisher groups in all major regions. A preliminary draft of the SSF Guidelines was tabled at two technical consultation sessions during 2013 and 2014, in Rome. Representatives of 88 member countries and a number of governmental and civil society organisations joined to negotiate and agree on the final text. On 9 June 2014, the 31st COFI session adopted the document, which empowered both coastal and inland fisheries with support for securing a socially and environmentally sustainable future (also see Jentoft 2014 and FAO 2015).

Box 2. Development of the New Song

Fisheries offer a crucial source of income and animal protein to Pacific Islanders. Recognising the need for an innovative and equitable approach in halting the decline of coastal fisheries resources, a regional workshop was held in March 2015 in Noumea, New Caledonia, to discuss the "Future of Coastal/Inshore Fisheries Management". The New Song was an outcome of this workshop, which was attended by more than 80 participants, including representatives from fisheries and environment departments in 22 SPC member countries and territories, coastal communities, SPC, the Forum Fisheries Agency and other agencies of the Council of Regional Organisations in the Pacific, non-governmental organisations, and academic institutions and consultants with a background in Pacific Island fisheries. After approval at several key regional forums (e.g. the 9th SPC Heads of Fisheries Meeting and the 93rd Official Forum Fisheries Committee Meeting), the New Song was endorsed in July 2015 by the 11th Ministerial Forum Fisheries Committee Meeting. Developed in less than five months, the New Song carries regional consensus, urgency and optimism into the future of Pacific Island coastal fisheries.

Comparison of visions

A direct comparison of vision statements is not possible because the SSF Guidelines do not contain a discrete vision statement. Instead, the objectives of the document (Part 1, 1, 1.1) provided an indirect reference to what these visions might be. For instance, "to enhance the contribution of small-scale fisheries to global food security and nutrition" (1.1a) was taken as envisioning creation of fisheries that can better contribute to food security and nutrition. The Objectives section within the SSF Guidelines and the vision statement of the New Song (section 4) both prioritised the themes of food security, socioeconomic improvement, sustainable management and environmental benefits to fishers and communities, as shown in Table 1. In addition, apart from the vision for the fisheries, comparing the vision for the policy itself (i.e. what role the policy document is ultimately designed to serve), also showed high consistency by confirming their purposes as providing internationally agreed on policy guidance to national governments and other relevant management authorities.

Comparison of guiding principles and approaches

Next, we compared the guiding principles or approaches to discern how each policy proposed to realise its prescribed visions (see Song and Chuenpagdee 2015 for a principle-based comparison of multiscalar fishery policy instruments). For the SSF Guidelines, we focused on 13 guiding principles presented in Part 1 and four implementation approaches described in Part 3. In the New Song, there were 11 approaches highlighted in Section 2. Comparison of the coded text generated six common bases out of the ten identified overall. As summarised in Figure 1 (see full text comparison in Appendix, Table A), they converged on the themes of non-discrimination and equity; community empowerment and stakeholder collaboration; feasibility and livelihood viability; holistic approaches; applying knowledge and monitoring progress; and political elevation and provision of support. The remaining four approaches were specific to either of the two policies; three were emphasised in the SSF Guidelines (human rights and dignity; sustainability and precautionary approach; transparency, accountability and rule of law), whereas the remaining one was more explicitly articulated in the New Song (scaling up of community-based ecosystem approach to fisheries management, or CEAFM, a composite coined by SPC to incorporate ecosystem-based approaches, with an emphasis on community-based management). This moderate overlap suggests a positive starting point for multiscalar coordination of the two instruments given that they subscribe to similar ways of going about and conducting implementation. We elaborate further on these results (concerning both the overlap and the more one-sided prescriptions) in the Discussion section below.

Table 1. Comparison of the visions between the Small-Scale Fisheries Guidelines and the New Song.

	SSF Guidelines (verbatim from Part 1, Introduction, 1. Objectives, 1.1)	**New Song** (verbatim from Section 4. A vision for coastal fisheries)
Vision for the fisheries	(a) enhance the contribution of small-scale fisheries to global **food security** and nutrition (b) equitable development of small-scale fishing communities and poverty eradication and to **improve the socioeconomic situation of fishers and fish workers** within the context of **sustainable fisheries management** (c) achieve the **sustainable utilisation, prudent and responsible management** and **conservation** of fisheries resources (d) contribution of small-scale fisheries to **an economically, socially and environmentally sustainable future** for the planet and its people	**Sustainable, well-managed** inshore fisheries, underpinned by community-based approaches that provide **food security**, and long-term **economic, social and ecological benefits to our communities**
Vision for the policy	(e) **provide guidance**…that could be considered by states and stakeholders for the **development and implementation** of ecosystem friendly and participatory **policies, strategies and legal frameworks** (f) enhance public awareness and promote the advancement of knowledge on the culture, role, contribution and potential of small-scale fisheries	It is designed to **provide direction** and encourage coordination, cooperation and an effective use of regional and other support services in the **development of coastal fisheries management** Not stated

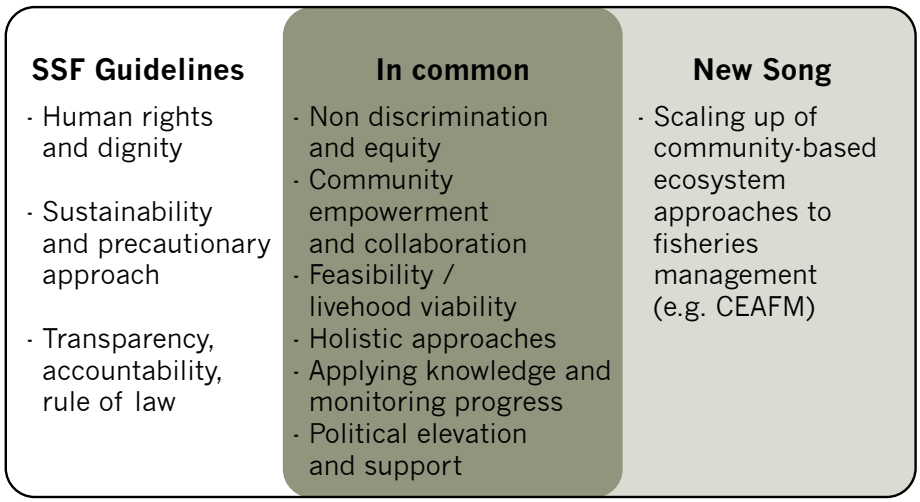

Figure 1. Comparison of the guiding principles and approaches in the SSF Guidelines and New Song. Each item represents a principle or approach, either commonly or partially, featured in the two documents.

Comparison of recommendations

The third comparison focused on the recommendations for action stipulated in the two documents. This step involved Part 2 of the SSF Guidelines representing "what is to be implemented" and Section 9 of the New Song titled "pathways to change framework", as they both describe a set of outcomes to be achieved. We compared the frequency with which particular themes (identified in Cohen et al. in press) appeared in the respective sections of the two documents. Fifteen themes emerged as most relevant here (see Fig. 2, also see Appendix, Table B for a detailed listing along with sample texts from each document). The majority of the themes that were important within the SSF Guidelines, such as tenure rights, gender equality, equitable access, human-social development and co-management, were also key aspects of the New Song (see row a, Fig. 2). A discussion on four themes — elevating human rights, addressing impacts of climate change, international fish trade, and managing for sustainability — was noticeably absent from the New Song, however (refer to row d). Interestingly, there were themes that are more extensively articulated in the New Song (row b), such as institutional coordination and strengthening, integrated approaches and monitoring, and research information and awareness raising. Notwithstanding the differences in the length of elaboration supplied in the respective sections, the overall pattern seems to suggest a large topical overlap. Together with the reasonable synchronisation observed in the visions as well as in the approaches, this result would represent another encouraging outcome that points towards the possibility of a synergistic implementation of these documents.

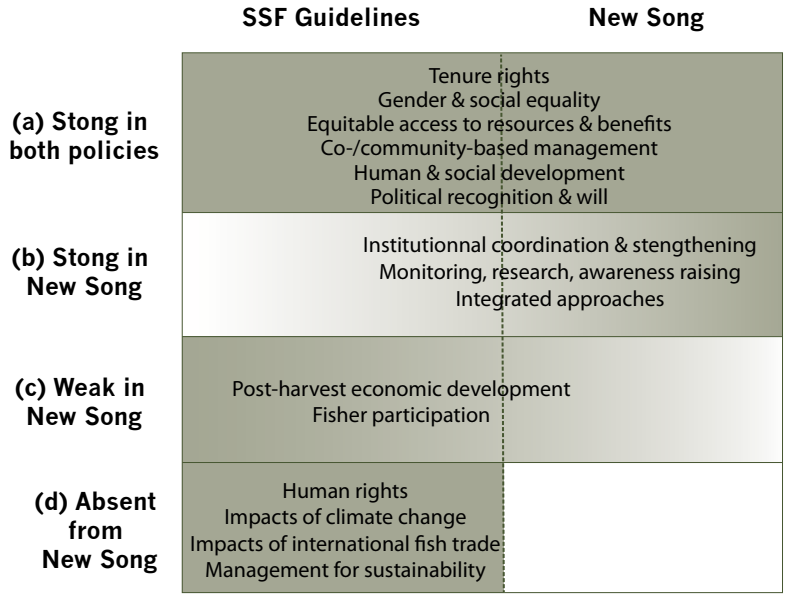

Figure 2. The implementation themes identified from the Small-Scale Fisheries Guidelines (see Cohen et al. in press) and their relative representation in the New Song.

Discussion

Here, we reflect on the main question of this article: Does the New Song agree with the Small-Scale Fisheries Guidelines: Are the two policies in harmony? All three levels of comparison suggest that many recommendations presented in the SSF Guidelines are shared by the New Song. First, the two policies present similar visions that support the social functions of small-scale fisheries. They both highlight a wide range of aspirations that together advance the goals of food security, gender equity, socioeconomic-ecosystem improvement and sustainable management. It is important to note that these aims are situated more closely with the "welfare"-based model, underscoring the importance of labour and income provision to resource-poor fishing households (Béné et al. 2010) than the "wealth"-based one, which is predicated on maximising economic rents and gross domestic product contributions (Cunningham et al. 2009).

At the more applied level, we found 11 themes to be common to both documents, with an emphasis on tenure rights, human development and social equity issues (row a, Fig. 2). Many common themes were also echoed in both sets of guiding principles and approaches (see the overlapping section in Fig. 1). This provides a reasonable indication that implementation of the New Song could, for the most part, workably operationalise the SSF Guidelines. We view the resultant pairing of these two policies to be an encouraging and useful strategy for fishery managers in Pacific Island countries and territories who are entrusted with overseeing their implementation.

While reiterating many of the key convictions of the global small-scale fisheries community, the New Song also carries a regional stamp. The Pacific regional identity and the salience of supra-national or regional bodies (e.g. SPC, FFA, the Secretariat of the Pacific Regional Environment Programme, and the Pacific Islands Forum Secretariat) likely contribute to the emphasis on institutional coordination, collaboration and partnership in the New Song (row b, Fig. 2). Likewise, keen promotion of CEAFM in the New Song (see Fig. 1) also likely comes with a special regional justification. Various forms of community-based management have a long and privileged history in the Pacific (e.g. Jupiter et al. 2014; Ruddle et al. 1992). In addition, given the geographically remote and culturally varied nature of the many coastal fisheries in the region, it is expected that the central oversight of national governments alone would be an ineffective model of administering the fisheries. Hence, local management based on community empowerment and customary leadership seems to be also gaining greater traction with national governments, and is being formally committed to as a promising way forward. Such plural governance strategies of both top-down and bottom-up approaches is important to developing multiscale and pragmatic buy-in of national and local participants (Morrison 2007).

Despite the similarities in the intent and themes of the New Song and the SSF Guidelines in the Pacific, there are several key recommendations of the SSF Guidelines that are under-represented or even absent in the New Song. The most noticeable omission is the theme of human rights and dignity, which is portrayed in the SSF Guidelines as the most fundamental guiding principle.[5] This perspective sees fishing and livelihood provisions as an inalienable right of a fisher or fish worker and is consistent with international human rights standards. Human rights are, thus, to be distinguished from the more narrowly-defined user rights or tenure rights, whenever possible, on the assumption that providing an assured route out of vulnerability and insecurity to sustain a dignified life is what needs to be secured first and foremost (Allison et al. 2012; Song 2015). It is imperative that the implementation of the New Song, particularly as it promotes tenure rights for coastal communities, is proceeded with this crucial distinction in mind and broadened to have explicit human rights considerations, so as not to work in contradiction to the SSF guidelines.

In moving forward, the SSF Guidelines and the New Song are purposefully non-prescriptive and open to fine-tuning at the level of implementation; re-interpretation and contextualization is not only possible but fully intended (see 2.4 and section 4, respectively). In line with this, Ruddle and Davis (2013:91) contend that "rights" in SSF settings are best understood from "the history, processes and dynamics of cultural expressions and social relationships represented in SSF peoples' identities, understandings, practices, and ways of living." Thus, even something as universal and impregnable as the notion of human rights should go through a measured introspection in adapting to national or local realities. Likewise, Cohen et al. (2015) have called for a continuous tinkering of CEAFM in the region to strike a right balance in the hybridisation of customary and contemporary, and in the interactions between co- and self-governance if it is to realise improved sustainability and equality in both social and ecological processes and outcomes.

National and territorial governments of the Pacific Islands region indeed have a crucial role to play in responsibly translating these guidelines into a viable plan of action. This will be no easy task, and

[5] "These objectives should be achieved through the promotion of a human rights-based approach." (Part 1, 1.2 of the SSF Guidelines text).

they must be able to rely on regional bodies as well as other academic, developmental and non-governmental partners for financial and technical support, as well as for research and monitoring. Nevertheless, that the New Song is well correlated with the SSF Guidelines should serve as a starting point for policy coordination in anticipation of their implementation. It is of paramount importance to seize the policy momentum emerging in the region and work together to advance the novel visions agreed on for coastal small-scale fisheries.

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Appendix

Table A. Comparison of the guiding principles and approaches contained in the two documents (bold italics are verbatim headings from the documents; a brief description of each guiding principle / approach is supplied in parentheses)

	Major themes derived from the headings	SSF Guidelines	New Song
Present in both documents	Non-discrimination and (cultural and gender) equity	***Non-discrimination*** (elimination of all kinds of discrimination) ***Gender equality and equity*** (recognition of women's role and promoting of equal rights and opportunities) ***Equity and equality*** (promoting justice and fair treatment with possible use of preferential treatment) ***Respect of cultures*** (respecting existing forms of organisation, traditional and local knowledge and practices of fishing communities)	***Women and youth*** (incorporating the voice of women and youth in community-based ecosystem approach to fisheries management (CEAFM) strategies and decision-making with them also receiving more equitable access to fishery benefits)
	Community empowerment and participation and stakeholder collaboration	***Consultation and participation*** (ensuring active, free, effective, meaningful and informed participation of fishing communities) ***Social responsibility*** (promoting community solidarity and fostering of an environment that encourages stakeholder collaboration) ***Capacity development*** (providing guidance for developing appropriate representative structures and developing the capacities in both government administrations and communities, in particular at decentralized and local level.	***Working together*** (urging stakeholders to sing in harmony from the same songbook to be effective and communities to have direct contact and support from all relevant participants including government) ***Empowering communities*** (supporting people at the community level so that they are empowered, motivated, and adequately resourced for successful CEAFM)
	Holistic and integrated approaches	***Holistic and integrated approaches*** (recognising the ecosystem approach to fisheries as an important guiding principle, embracing the notions of comprehensiveness and ensuring cross-sectoral coordination) ***Policy coherence, institutional coordination and collaboration*** (relying on better integration of the sector into broader development processes and policies and facilitating improved institutional coordination and collaboration to ensure policy coherence)	***A holistic approach*** (concurrently managing other impacts on coastal ecosystems including mining, logging, urban development, tourism, climate change and natural disasters) ***Closing the [food] gap*** (inclusion of alternative sources of protein and other foods through complementary strategies from communities and other sectors (e.g. health, agriculture, education)
	Feasibility and livelihood viability	***Feasibility and social and economic viability*** (ensuring that policies and actions for improving small-scale fisheries governance and development are socially and economically sound, rational and implementable)	***Maintaining livelihoods*** (provision of alternative sources of income in a way that is consistent with securing longer-term incomes and future sustainability of coastal communities) ***Using the right methods*** (ensuring that management approaches are simple, realistic and implementable and take local and sub-regional differences into account) ***Closing the [food] gap*** (seeking alternative sources of fish for food to meet the increasing demand (e.g. fish aggregating devices, aquaculture and small pelagic fish)

Table A. continued

	Major themes derived from the headings	SSF Guidelines	New Song
Present in both documents	Understanding and applying knowledge and monitoring progress	*Information, research and communication* (using bioecological, social, cultural and economic information as well as traditional knowledge, and its related research and communication to support decision-making and action) *Implementation support and monitoring* (guiding development of monitoring and assessment measures that allow feedback into policy-making processes)	*Understanding the facts* (applying gathered facts and knowledge on what works and does not work in CEAFM and conducting further analytical work)
	Political elevation and provision of support	*Implementation support and monitoring* (calling for support of development partners, promoting the formation of national level platforms to oversee implementation as well as relying on FAO to support the development of a Global Assistance Programme)	*Advocacy and political will* (relying on significant and sustained political commitment from all levels including the highest political level and beyond the fisheries sector) *Balancing offshore and inshore fisheries* (ensuring an appropriate level of long-term funding support to coastal fisheries management in relation to commercial tuna fisheries)
Partial to the SSF Guidelines	Human rights and dignity	*Human rights and dignity* (recognising the inherent dignity and the equal, universal and inalienable human rights of all individuals and their applicability to communities)	
	Economic, social and environmental sustainability and precautionary approach	*Economic, social and environmental sustainability* (applying the precautionary approach and risk management to guard against undesirable outcomes, including overexploitation of fishery resources and negative environmental, social and economic impacts)	
	Transparency, accountability and rule of law	*Transparency* (clearly defining and widely publicising policies, laws and procedures and widely publicising decisions in formats accessible to all) *Accountability* (holding individuals, public agencies and non-state actors responsible for their actions and decisions according to the principles of the rule of law) *Rule of law* (adopting a rules-based approach through laws that are widely publicised, applicable to all, equally enforced and independently adjudicated, and that are consistent with existing national and international law)	
Partial to the New Song	Contextual scaling up of CEAFM		*Scaling up* (building on CEAFM successes and expanding them to meaningful proportions of the coastal environment) *Using the right methods* (Complementing CEAFM with other tools, including control of exports and regulatory approaches, recognising that CEAFM, or any one method, will not be appropriate everywhere)

Table B. Comparison of recommendations on what to be implemented (or outcomes to be realised) based on the themes identified in Cohen et al. (in press) (italicised text refers to a descriptor used for identifying each theme)

Implementation themes	Examples of relevant text and where featured	
	SSF Guidelines	New Song
Tenure rights *– Specific mention of tenure as an instrument, tenure rights, and the interpretation of tenure rights*	"States… and all other parties should recognize, respect and protect all forms of legitimate tenure rights, taking into account, where appropriate, customary rights to aquatic resources and land and small-scale fishing areas enjoyed by small-scale fishing communities" (5.4); (also see Chapter 5a, especially 5.1-5.4, 5.6-5.9, 5.11 and 5.12)	"Informed, empowered coastal communities with clearly defined user rights" (Outcome #1)
Human rights *– Direct references to human rights, or references to respecting freedom, non-discrimination, inclusion and other relevant notions*	"States should take steps with a view to the progressive realization of the right of small-scale fishers and fish workers to an adequate standard of living and to work in accordance with national and international human rights standards" (6.7); (also see 5.12, 6.1, 6.7, 6.12, 6.13, 8.2)	Not directly mentioned
Gender equality and equity and fair treatment of marginalized groups *– Calls for special attention for women and other vulnerable groups*	"States should involve small-scale fishing communities – with special attention to equitable participation of women, vulnerable and marginalized groups – in the design, planning and, as appropriate, implementation of management measures, including protected areas, affecting their livelihood options" (5.15) "Preferential treatment of women, indigenous peoples, and vulnerable and marginalized groups – in providing services and giving effect to non-discrimination and other human rights – should be accepted and promoted where it is required to ensure equitable benefits" (6.2); (see also Chapter 8, 5.18, 6.5, 6.9, 7.2)	"More equitable access to benefits and decision making within communities, including women, youth and marginalised groups" (Outcome #7) "Plans take account of equity issues, especially those involving gender and youth" (part of Outcome #7)
Equitable access to resources and benefit distribution *– Refers to the distribution of benefits socially within fishing communities, but also include distribution of benefits geographically or sectorally*	"The Guidelines support equitable distribution of the benefits yielded from responsible management of fisheries and ecosystems, rewarding small-scale fishers and fish workers, both men and women" (5.1) "States should adopt measures to facilitate equitable access to fishery resources for small-scale fishing communities, including, as appropriate, redistributive reform" (5.8); (also see 5.7, 7.8)	"More equitable access to benefits and decision making within communities, including women, youth and marginalised groups" (Outcome #7); "Equitable access to the resource and benefits from coastal fisheries within communities" (part of Outcome #7)
Human and social development *– Calls for local to higher level broader social development efforts (for instance, through simultaneous to management efforts or as a specific objective of fisheries reform)*	"States should promote investment in human resource development such as health, education, literacy, digital inclusion and other skills of a technical nature that generate added value to the fisheries resources as well as awareness raising" (6.2) "States and other stakeholders should support already existing, or the development of complementary and alternative income-generating opportunities – in addition to earnings from fisheries-related activities – for small-scale fishing communities, as required and in support of sustainable resource utilization and livelihood diversification" (6.8); (also see Chapter 6, especially 6.2-6.4, 6.6-6.8 and 6.14, 5.1 and 8.4)	"Diverse livelihoods reducing pressure on fisheries resources, enhancing community incomes, and contributing to improved fisheries management" (Outcome #8); "Informed and empowered communities – robust awareness and communication programmes" (part of Outcome #1)
Addressing impacts of international fish trade *– Specific reference to trade across national borders*	"States should give due consideration to the impact of international trade in fish and fishery products and of vertical integration on local small-scale fishers, fish workers and their communities. States should ensure that promotion of international fish trade and export production do not adversely affect the nutritional needs of people for whom fish is critical to a nutritious diet, their health and well-being and for whom other comparable sources of food are not readily available or affordable" (7.7); (also see 7.6, 7.9)	Not directly mentioned

Table B. continued

Implementation themes	Examples of relevant text and where featured	
	SSF Guidelines	New Song
Fisher participation *– Include participation and representation of fishers in management efforts to policy forums*	"States should facilitate, train and support small-scale fishing communities to participate in and take responsibility for, taking into consideration their legitimate tenure rights and systems, the management of the resources on which they depend for their well-being and that are traditionally used for their livelihoods" (5.15) "All endeavours should be made so that small-scale fisheries are represented in relevant local and national professional associations and fisheries bodies and actively take part in relevant decision-making and fisheries policymaking processes" (5.17) "Women should be encouraged to participate in fisheries organizations, and relevant organizational development support should be provided" (8.2); (also see 5.5, 5.18, 7.1, 9.2)	"Greater inclusivity of decision-making while acknowledging cultural norms and traditional values" (part of Outcome #7)
Management for sustainability *– Refers to the objectives of ecological sustainability or sustainability in broader sense. May include term conservation. May refer to specific measures (reduction of efforts, catch limits) where they are applied to promote ecological sustainability.*	"States should ensure that effective fisheries management systems are in place to prevent overexploitation driven by market demand that can threaten the sustainability of fisheries resources, food security and nutrition" (7.8) "States should avoid policies and financial measures that may contribute to fishing overcapacity and, hence, overexploitation of resources that have an adverse impact on small-scale fisheries" (5.20); (also see 5.13, 5.20)	Not directly mentioned
Institutional coordination and strengthening *– Includes general calls for institutional coordination and also details specific mechanisms to achieve coordination or coherence. Also includes cross-sectoral and cross-scale interactions - see also integrated approaches*	"States and development partners should recognize the traditional forms of associations of fishers and fish workers and promote their adequate organizational and capacity development in all stages of the value chain in order to enhance their income and livelihood security in accordance with national legislation. Accordingly, there should be support for the setting up and the development of cooperatives, professional organizations of the small-scale fisheries sector and other organizational structures, as well as marketing mechanisms, e.g. auctions, as appropriate" (7.4) (also see 6.10)	"Strong partnerships at all levels" (part of Outcome #1) "Re-focused fisheries agencies that are transparent, accountable, and adequately resourced, supporting coastal fisheries management and sustainable development, underpinned by CEAFM" (Outcome #4) "Strong and up-to-date management policy, legislation and planning" (Outcome #5) "Effective collaboration and coordination among stakeholders and key sectors of influence" (Outcome #6) "National forums are coordinating and providing cross-sector advice relevant to coastal fisheries management" (part of Outcome #6) "Regional and national coordination of policy" (part of Outcome #6)

Table B. continued

Implementation themes	Examples of relevant text and where featured	
	SSF Guidelines	New Song
Monitoring, research information and awareness raising *– Includes calls for improved data management, data collection and research. Also includes calls for integration of multiple knowledge sources (e.g., contemporary science and local knowledge). Also includes calls for "awareness raising"*	"States should ensure the establishment of monitoring, control and surveillance (MCS) systems or promote the application of existing ones applicable to and suitable for small-scale fisheries" (5.16) "All parties should collaborate to develop functional evaluation systems to assess the impact of legislation, policies and actions for improving women's status and achieving gender equality" (8.3); (also see 7.10)	"Coastal fisheries management and marine ecosystems included in school curricula" (part of Outcome #1) "Adequate and relevant information to inform management and policy" (Outcome #2) "Raised public support of coastal fisheries through engaging awareness campaigns with consistent and community-relevant messaging and creative information-sharing tactics (e.g. use of celebrities, role models, etc.)" (part of Outcome #3) "Documented coastal fisheries management activities, which are regularly reviewed" (part of Outcome #4) "Effective policy implementation through plans, monitoring and evaluation" (part of Outcome #5)
Political recognition and will *– Calls to increase the profile and recognition of small-scale fisheries and fishers and associated concerns*	Implicit throughout	"Recognition of, and strong political commitment and support for, coastal fisheries management at a national and sub-national scale" (Outcome #3); "Informed and supportive politicians at the national and sub-national levels" (part of Outcome #3); "Coastal fisheries management is a permanent agenda item at regional meetings" (part of Outcome #3)

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Pacific Community, Fisheries Information Section
BP D5, 98848 Noumea Cedex, New Caledonia
Telephone: +687 262000; Fax: +687 263818; cfpinfo@spc.int; http://www.spc.int/coastfish