



## Member's report on activities to ICRI

Presented by Wildlife Conservation Society

Reporting period January - July 2012

### 1. General Information

Are you an ICRI Member?	Yes
Representation to ICRI (Country / Organization):	
<b>Focal Point 1:</b>	
<i>Name:</i>	Caleb McClennen
<i>Organization:</i>	
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<b>Focal point 2:</b>	
<i>Name:</i>	Elizabeth Matthews
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Last meeting attended:	25 <sup>th</sup> GM – la Réunion

For countries only:

<b>National Action Plan / Initiative</b>	
Do you have a National Coral Reef action plan or similar? If so please provide URL:	
If you are you engaged in any regional programs / initiatives relating to coral reefs, please indicate which ones:	

2. **Updates on your activities** (new initiatives/programs/projects of your government /organization which will be of interest to the ICRI Members). Examples include MPA declarations, World Heritage sites status, economic valuation of reefs, policy changes in relation to coral reefs etc.

#### **Fiji**

**LMMAs:** Following extensive mapping and scientific analysis (incorporating biodiversity, fisheries, and resilience criteria), consultations with stakeholders, and further discussions with district resource management committees and villages in the districts of Wailevu, Wainunu, Nadi and Solevu in Vanua Levu, new marine management areas have been designated. All area boundaries and rules for these new MPAs have been agreed upon, resulting in 93.1 km<sup>2</sup> and 73.8 km<sup>2</sup> of new marine and adjacent terrestrial areas, respectively, under protection. A draft of the Wainunu EBM plan was completed in April 2012, and a signing ceremony was held on June 1, 2012. Final drafts of EBM plans for Wailevu, Nadi and Solevu districts are currently being prepared.

#### **Madagascar**

**LMMAs:** In April 2012, six new locally managed marine areas (LMMAs) were designated in two districts incorporating parts of Antongil Bay in northeast Madagascar, thus bringing the current number of LMMAs in Antongil Bay to thirteen with a total reserved area of ca. 3270 ha.

**Fisheries Management:** A process was initiated in early 2012 to develop a national policy on marine fisheries which takes into account the principles of good governance. Four commissions

have been established to support the process of developing a 5-year fisheries management strategy. An explicit component of the process is stakeholder involvement, including of NGOs, among them WWF, Blue Ventures, and WCS.

### 3. Contribution to the ICRI GM

*Your responses to the following questions will assist the Secretariat in assessing contributions towards the major themes of the current ICRI action plan and objectives of the general meeting.*

#### a. Management effectiveness

Are you engaged in an assessment of management effectiveness in your marine areas? If so, the ICRI Secretariat invites members to provide a 5-minute presentation on a case study relative to assessing the management effectiveness of an MPA during the management effectiveness workshop that will be held on the Tuesday (17 July). The 5 minute presentation will provide an overview of:

- What kind of assessment was undertaken
- How the results of this assessment are being used.

The presentation can be illustrated with a PowerPoint presentation or not; if a PowerPoint is used than it should not exceed 5 slides.

Please indicate whether you would like to provide a presentation as described above:

YES  NO

Is there any other aspect of management effectiveness you would like to share with ICRI members? No.

#### b. Community stewardship

Are there any activities or initiatives involving community engagement in coastal marine management that you are involved with?

Community engagement is a major component of WCS's work in all our marine sites around the world. Three examples of recent work are presented below.

**Expansion of LMMAs in Kenya.** WCS has been working with communities along the Kenyan coast to identify and establish locally managed marine areas (called *tengefu*). In addition to biophysical and socioeconomic assessments at more than 10 *tengefu*, WCS supports the convening of an annual Fishers Forum in which local fish-landing beach leaders, fishers, scientists and resource managers meet to discuss survey results at the *tengefu*, fisheries catch data and the impacts of different types of fishing gear, and management options. The August 2011 Fishers Forum counted 120 participants and attracted the attention of the Director and Provincial Director of the Kenya Ministry of Fisheries Development, who have now publically voiced their support for the creation of additional locally managed marine areas along the Kenyan coast. WCS is also working with communities in Kibuyuni piloting a modified trap that has been shown to improve the catch by reducing small fish, and by-catch improving the quality and profitability of the catch. This is not only beneficial to fishers livelihoods but also for coral reefs.

**Assessing the effectiveness of locally managed marine areas (LMMAs).** WCS facilitated a symposium at the Society for Conservation Biology's 1<sup>st</sup> Marine Think Tank in Auckland, New Zealand in December 2011 on "Improving the Effectiveness of Community-Managed Marine Protected Areas for Biodiversity Conservation, Fisheries Management and Climate Change Adaptation". Fifty scientific experts and management practitioners from the Coral Triangle-Oceania region discussed current knowledge on the ability of LMMAs to achieve multiple

objectives (e.g., fisheries management, biodiversity conservation, socio-economic goals, climate change adaptation). WCS Fiji presented on the impacts of unregulated harvests of customary marine closures (Jupiter et al 2012), which was followed by a discussion resulting in a consensus on best practice guidelines for periodic harvests. WCS Fiji will be soon beginning a targeted investigation on the impacts of periodic harvests on coral reef fish populations.

### **Community engagement and co-management in Madagascar**

**Nosy Be Seascape, northwest Madagascar.** Since 2010, WCS has been working with local communities and the government in the Nosy Be Seascape to create and manage, on behalf of the Ministry of Environment, two new Marine Protected Areas (MPAs), covering 70,000 hectares of critical habitats. The Ankarea MPA, 50 kilometers northeast of Nosy Be, includes one large island, Nosy Mitsio, as well as an archipelago of 16 neighboring islands. The Ankivonjy MPA, 50 kilometers southwest of Nosy Be, includes the coastal ecosystems of Ampasindava peninsula and marine ecosystems between the islands of Nosy Iranja and Ankazoberavina. During this process, WCS and its partners have been conducting intensive consultations and discussions with communities and all stakeholders. This has led to the creation of the Ankarea and Ankivonjy MPA Local Management Committees with members that include representatives of each village, private tourist operators, and local authorities. These Local Management Committees were given legal status on January 23, 2012 when they were recognized as associations: Association Ankivonjy and Association Ankarea. Their goals are to: 1) preserve, protect, and manage natural resources of the MPA; 2) promote the sustainable development of fisheries and tourism; 3) manage conflicts arising from the use of natural resources in the MPA; 4) protect common interests in the area of the MPA; and 5) improve the living standards of communities in the area of the MPA. The first Local Management Committee's General Meetings for each MPA took place in April 2012 followed by an information campaign in each village on the roles and missions of these new committees.

**Southwest Madagascar.** One of the biggest reef complexes in the world extends 458 km between Androaka and Morombe in southwest Madagascar. Pressure on this seascape has increased dramatically in recent years with a continuing increase in the number of people living in the region, increasing market demand for marine products and climate change impacts. WCS's overall objective in Toliara is to improve fisheries management and promote conservation measures that are essential for the survival of this ecosystem and ensure that the livelihoods of the village communities that depend on it are sustainable. WCS implemented community management of fisheries within the municipalities of Manombo and Saint Augustin, where we helped to establish 18 temporary closed marine reserves managed by the local association Soariake in Manombo and the local association Tahosoa in Saint Augustin. In early 2012, these associations organized their annual general meetings with representatives of all villages, local authorities, private operators and other key stakeholders. During the Tahosoa general meeting, discussions focused mainly on the need to improve the synergy among stakeholders in the area through an integrated coastal management approach. It was decided that Saint Augustin municipality authorities will establish an integrated coastal management committee whose role and mission will be to ensure better coordination of development and conservation projects and initiatives in the Saint Augustin coastal zone. During the Soariake general meeting, discussions focused on 2012 activities and a plan to secure definitive protection status for the Salary Bay Marine Protected Area covering 45,084 ha of critical marine habitats.

#### **4. Is there any other topic you would like to raise during the meeting?**

YES  NO

If yes, please indicate which topic and the reason why you would like to raise it:

**5. Please list publications, reports you have been released since the last meeting.**

See below (incorporating publications omitted from last ICRI report).

**6. Please indicate upcoming coral reef-related meetings you will attend**

International Coral Reef Symposium, 9-13 July, Cairns, Australia	X
IUCN World Conservation Congress, 6-15 September 2012, Jeju	X
<p>→ Are you planning to organise a side event? Please indicate:  WCS is co-hosting a “knowledge café” on: Uniting for action in the Western Indian Ocean: climate resilience, food security and biodiversity conservation</p>	
11 <sup>th</sup> Meeting of the Conference of the Parties on Biological Diversity (COP-11), 8-19 October 2012, Hyderabad, India	X

Other: N/A

**PUBLICATIONS****WCS Reports**

Jupiter S, Jenkins A, Koto K, Ah Tong J, Bwebe T, Cakacaka A, Dulunaqio S, Fox M, Kuritani L, Mario S, Naisilisili W, Nand Y, Tukana A, Weeks R, Yakub N (2012) *Effects of alteration to catchments and streams on freshwater fish communities of Vanua Levu, Fiji*. Wildlife Conservation Society. Suva, Fiji. 17 pp.

Jupiter S, Fox M, Cakacaka A, Caginitoba A, Askew N, Qauqau I, Weeks R, Prasad S (2012) *Building provincial-level integrated coastal management plans: Outcomes from the Vatu-i-Ra Seascape Stakeholders Workshop*. Wildlife Conservation Society Fij. Suva, Fiji. 46 pp.

**Papers**

Allnutt TF, McClanahan TR, Andréfouët S, Baker M, Lagabrielle E, et al. (2012) Comparison of Marine Spatial Planning Methods in Madagascar Demonstrates Value of Alternative Approaches. *PLoS ONE* 7(2): e28969. doi:10.1371/journal.pone.0028969

Aswani S, Christie P, Muthiga NA, Mahon R, Primavera JH, Cramer LA, Barbier EB, Granek EF, Kennedy CJ, Wolanski E, Hacker S (2011) The way forward with ecosystem-based management in tropical contexts: Reconciling with existing management systems. *Marine Policy* 26(1):1-10. doi:10.1016/j.marpol.2011.1002.1014

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Carreiro Silva M, McClanahan TR, Kiene WE (2012) Phosphorus and nitrogen effects on endolithic microbial communities and their bioerosion rates. *Marine Pollution Bulletin* 64(3):602-613

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Cinner JE, McClanahan TR, Wamukota A (2010) Differences in livelihoods, socioeconomic characteristics, and knowledge about the sea between fishers and non-fishers living near and far from marine parks on the Kenyan coast. *Marine Policy* 34:22-28.

Cinner JE, Daw TM, McClanahan TR, Muthiga N, Abunge C, Hamed S, Mwaka B, Rabearisoa A, Wamukota A, Fisher E, Jiddawi N (2012) Transitions toward co-management: the process of marine resource management devolution in three east African countries. *Global Environmental Change*. doi.org/10.1016/j.gloenvcha.2012.03.002.

- Clark TR, Zhao J-X, Feng Y, Done T, Jupiter S, Lough J, Pandolfi J (2012) Spatial variability of initial  $^{230}\text{Th}/^{232}\text{Th}$  in modern *Porites* from the inshore region of Great Barrier Reef. *Geochimica et Cosmochimica Acta* 78:99-118
- Darling ES, McClanahan TR, Cote IM (2010) Antagonistic interaction between bleaching and fishing on coral communities. *Conservation Letters* 3:122-130
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- Daw TM, Cinner JE, McClanahan TR, Brown K, Stead SM, et al. (2012) To Fish or Not to Fish: Factors at Multiple Scales Affecting Artisanal Fishers' Readiness to Exit a Declining Fishery. *PLoS ONE* 7(2): e31460. doi:10.1371/journal.pone.0031460
- Fox M, Naisilisili W, Batibasaga A, Jupiter S (in press) Opportunities and challenges of managing spawning aggregations in Fiji. Proceedings of the 12th International Coral Reef Symposium, Cairns, Australia.
- Graham NAJ, Chabanet P, Evans RD, Jennings S, Letourneur Y, MacNeil MA, McClanahan TR, Ohman MC, Polunin NVC, Wilson SK (2011) Extinction vulnerability of coral reef fishes. *Ecology Letters* 14:341-348
- Granek EF, Polasky S, Kappel CV, Reed DJ, Stoms DM, Koch EW, Kennedy CJ, Cramer LA, Hacker SD, Barbier EB, Aswan S, Ruckelshaus M, Perillo GME, Silliman BR, Muthiga N, Bael D, Wolanski E (2010) Ecosystem services as a common language for coastal ecosystem-based management. *Conservation Biology* 24:207-216
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- McClanahan TR (2010) Effects of fisheries closures and gear restrictions on fishing income in a Kenyan coral reef. *Conservation Biology* 24:1519-1528
- McClanahan TR (2011) Comparing coral reef fish communities in urban fisheries closures and "sustainable seascapes": Kenya vs. Maldives. *Aquatic Conservation-Marine and Freshwater Ecosystems* 21:196-198

- McClanahan TR (2011) Coral reef fish communities in management systems with unregulated fishing and small fisheries closures compared with lightly fished reefs - Maldives vs. Kenya. *Aquatic Conservation-Marine and Freshwater Ecosystems* 21:186-198
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- McClanahan TR, Kaunda Arara B, Omukoto JO (2010) Composition and diversity of fish and fish catches in closures and open access fisheries of Kenya. *Fisheries Management and Ecology* 17:63-76
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## Books

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- McClanahan TR, Cinner JE (2011) *Adapting to a changing environment; Confronting the consequences of climate change*. Oxford University Press.
- Muthiga NA, Kawaka J. (2010). Progress towards conservation science for marine protected areas in Kenya: An annotated bibliography. WIOMSA Book Series No. 4. v+171