



Member’s report on activities related to ICRI

Reporting period July 2012 - October 2013

NOTE: TO CHECK A BOX DOUBLE CLICK ON IT AND TICK ‘CHECKED’ UNDER ‘DEFAULT VALUE’ IN THE POP UP WINDOW

- 1. General Information** (note that this information will be posted on the ICRI website in your member page: <http://www.icriforum.org/about-icri/members-networks>)

Are you an ICRI Member?	Yes
Member type (Country / Organization):	Organization
Focal Point 1:	
<i>Name:</i>	Caleb McClennen
<i>Organization:</i>	Wildlife Conservation Society
<i>Email:</i>	cmclennen@wcs.org
Focal point 2:	
<i>Name:</i>	Elizabeth Matthews
<i>Organization:</i>	Wildlife Conservation Society
<i>Email:</i>	ematthews@wcs.org
Last meeting attended:	
Related website(s)	

- 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.

Belize

Marine Protected Areas and Fishery Replenishment Zones:

The Government of Belize has committed to a national target of at least 10 percent of the country’s territorial sea under management as no-take or fishery replenishment zones. In early 2012, the percentage under no-take was about 2.1%; with the designation of the Turneffe Atoll Marine Reserve in December 2012 the area under no-take was increased to almost 3%. In early 2013 a collaborative Steering Committee with representation from government, non-government conservation organizations, and the private sector was established to steer the process of this replenishment zones expansion. WCS is facilitating this co-managed process of designation of no-take expansion through support for the Steering Committee and the appointment of a Project Coordinator to lead the necessary networking and consultations with the various partners that are contributing to the common goal. WCS is also leading a communications campaign critical in addressing the remaining barriers to achieving this no-take target.

WCS is continuing efforts to improve management at South Water Caye Marine Reserve and Glover’s Reef Marine Reserve, which together represent about 30% of all current no-take coverage in Belize. An important aspect of this work is showing the positive impact of full protection of the spawning aggregation site at Glover’s Reef and successful delivery of our long-term target—a ten-fold increase in the number of aggregating Nassau groupers at this site by 2025. Over the past six years, the numbers of aggregating groupers have not dropped below 1,000 fish at both the Glover’s Reef and Lighthouse Reef sites, and we are cautiously optimistic that numbers will slowly recover to meet this target.

Sustainable Fisheries Initiative – Managed Access Program:

Working in partnership with the Environmental Defense Fund (EDF), WCS is now scaling up the successful Managed Access pilot from Glover’s Reef to South Water Caye, while also supporting national implementation throughout the marine reserve system. Managed Access aims to end the open-access fishery in Belize by ensuring that only traditional and responsible fishers who rely on the reserves for their livelihoods have access to these areas. Managed Access aims to reduce overfishing, reduce fishing capacity, improve catch per unit of effort (CPUE), increase economic yield through value-added and improved marketing, and reduce illegal, unreported and unregulated fishing.

KenyaLocally Managed Areas:

There is great interest on the Kenyan coast to expand co-management of marine resources, and to establish locally managed marine areas closed to fishing, called *tengefu*. WCS has been working with communities since 2006 to identify and map potential areas. In the last 5 years, we have supported the creation of 16 *tengefu* that are IUCN category IV. Many sites where we work have shown increased fisheries catches, some *tengefu* are showing recovery in coral cover and finfish biomass, and communities from new sites along the Kenya coast have been approaching us for support in setting up community closures.

Although *tengefu* have the potential to generate significant benefits for marine conservation and local people, they are often beset by challenges - communities lack resource management experience, compliance and enforcement are often weak, and poor socioeconomic conditions of local communities foster disempowerment and impede active participation. WCS is working to address these challenges by encouraging and promoting participatory processes, and by using knowledge generated to develop adaptive management systems for *tengefu* that take into account social, ecological and institutional realities.

The annual Fishers’ Forum was hosted by WCS in partnership with local fisheries scientists and departments, in which fishers, fisheries managers and other stakeholders meet to discuss status and trends in coastal fisheries, as well as options for fisheries management. This Forum continues to generate interest and wider attendance each year.

Madagascar

Over the past ten years, WCS has led the creation of four new community-based MPAs (IUCN Protected Area Categories V and VI), under temporary protection and covering 5,366 square kilometers of critical marine habitats on Madagascar’s west coast, where 90% of Madagascar’s remaining reefs and mangroves are found. Over the past year, WCS Madagascar has advanced the management effectiveness of three of those MPAs (Ankarea and Ankivonjy in the northwest and Soariake in the southwest), integrating biodiversity conservation, poverty reduction, economic growth and community-led management of natural resources. Key to this work is engaging both communities and local government partners in a collaborative management framework.

Antongil Bay seascape: WCS leads implementation of an Integrated Coastal Zone Management approach in Antongil Bay (in northeast Madagascar) where local communities and social conventions are integral. To refine and strengthen these coastal and marine community governance and resource management structures, WCS initiated and/or expanded the following activities during the past year:

- Continued supporting the 16 LMMA (locally managed marine areas) network in the Bay by organizing a series of trainings, and by sharing best practices for resource governance, participatory evaluation of established LMMAs to assess performance, and site exchanges between established LMMAs to facilitate information exchange and build alliances to establish a federation of LMMA sites.

- Expanded support for local community-led vigilance committees to improve their enforcement of fishing regulations, including organizing a series of joint law enforcement missions with local fisheries authorities, which led to a series of seizures of illegal fishing materials and the apprehensions of offenders.
- Initiated a training series with community associations to promote diversified and sustainable livelihoods. The trainings focused on the fabrication of improved woven nets to enhance catch effort, and the processing/conservation/drying of fish catch to increase salability.
- Expanded a scientific ecological monitoring program in the LMMA network to foster adaptive management and promote best practices. This included participatory monitoring of fish catches and underwater visual censuses of coral reef health, fish diversity, and fish biomass.

Fiji

Spreading and strengthening district-level ecosystem-based management (EBM): WCS's geographic reach in Fiji has grown rapidly. From working with only 10 villages and 1 settlement in Kubulau District at the start of 2010, we are currently engaged and reaching out to 85 villages and 22 settlements spread across Bua and Cakaudrove provinces on Vanua Levu to conduct community-based marine management. We are therefore learning to be more efficient and impactful with our outreach, while building local capacity to guide management planning and implementation.

Over the past ten months, WCS has continued our support of districts that have already endorsed their EBM plans (Kubulau, Wainunu: Bua Province; Wailevu: Cakaudrove Province), with our energies primarily directed at capacity building for local resource management committees (RMCs). We are also strengthening management in additional areas in Bua Province to consolidate local rules into EBM plans and formalize new RMCs. Simultaneously, and for the first time, we are engaging with currently unmanaged districts in Bua Province (Vuya, Dama, Lekutu, Navakasiga) to initiate the process of participatory planning and management.

Indonesia

Marine protected areas management planning: From July to October 2012 we conducted focus group meetings at 19 villages in North Sulawesi. These discussions helped mobilize support from village leaders and their communities that is critical to improving the management of community-based marine protected areas and the nearby marine waters and habitats. The meetings were also used to gauge the current levels of active operational management within each community MPA, to further develop management plans for the community-based MPAs within these 19 villages, and to discuss how best to link the MPAs into a collaborative network recognized by the district government. Across the 19 villages, 119 people were involved in management planning, including 19 heads of villages, 10 heads of village planning agencies, 4 village secretaries, 36 community leaders, and 60 staff of village MPA management units.

Depending on specific village needs, each management plan included a minimum of one and maximum of three types of management planning: (i) MPA management plans for coral reefs, and/or mangrove forest natural resources; (ii) eco-tourism development; and (iii) alternative livelihoods. The development of these plans is a significant achievement for the communities of the North Minahasa District, as it provides the basis for greater recognition and support from district government agencies for the regulations that govern marine natural resources and coastal livelihoods while also providing opportunity for cross village collaboration within a formalized management plan.

In Karimunjawa National Marine Park, we are working with local communities and the National Park Authority to improve fisheries co-management through education, training and participatory research. We have developed standardized operating procedures for community-based law enforcement with governments and communities, are leading social marketing

campaigns on minimum landing size for sustainable fisheries, and are conducting ecological surveys to aid in protection of fish stocks.

Papua New Guinea

Local management of small-scale fisheries: Building on work with communities to foster marine conservation in New Ireland Province, WCS PNG has begun a project to improve the management of locally important species across a set of communities in New Ireland. The goal of this work is to develop a model for successful collaborative fisheries management that fully engages the local communities in PNG who are most dependent on the health of these fisheries in the fisheries management process.

Building community capacity for climate change adaptation: As part of the project Mangrove Rehabilitation for Sustainably Managed Healthy Forests (MARSH), WCS PNG is working with communities in two Local Level Governments (LLG) in New Ireland, Lavongai and Tikana, to address negative impacts of climate change. The work, done with local partners, aims to improve coastal zone management by building community capacity for sustainable mangrove forest management. WCS and partners are also working to reduce deforestation and forest degradation by increasing community support and capacity to rehabilitate and manage mangrove forests sustainably. WCS is conducting training for partners and community members on various aspects of mangrove management in ten areas of interests in the two LLGs with the intention of building partnerships for long term livelihood protection.

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. Community-based monitoring

Are you engaged in, or support community-based monitoring in your marine areas? If so, think about what works and what doesn't with it to be prepared for workshop discussions on this topic. The discussions will revolve around:

- The benefit of community-based monitoring for management and reporting
- Way forward and how countries could support each other through a network of persons involved in monitoring and an online database.

b. Co-management

Do you have co-management arrangements in place for your marine reserves? If so, start thinking about what they are, and what works for you in preparation for workshop and field trip discussions on this topic. There will be some interactive exercises to help guide your thinking and possible way forward.

Yes we do, please see above in our updates section.

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:

[Insert text here]

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

Title (incl. author and date)	Type of publication (Paper, report etc.)
Askew N, Mailautoka K, Caginitoba A, Jenkins A, Jupiter S (2013) Strengthening conservation and management across the Mt. Navotuvotu – Mt. Kasi Forest Corridor: Biodiversity Summary Report, December 2012. Wildlife Conservation Society, Suva, Fiji, 35 pp	Report
Babcock E, Coleman R, Karnauskas M, Gibson J (2013) Length-based indicators of fishery and ecosystem status: Glover's Reef Marine Reserve, Belize. Fisheries Research 147:434-445	Paper
Baird, A. H., Pratchett, M.S., Hoey, A.S., Herdiana Y. & Campbell, S.J. (2013) <i>Acanthaster planci</i> is a major cause of coral mortality in Indonesia <i>Coral Reefs</i> , 32:803-812	Paper
Bruggemann, J. H., M. Rodier, M. M. M. Guillaume, S. Andr��fou��t, R. Arfi, J. E. Cinner, M. Pichon, F. Ramahatratra, F. Rasoamanendrika, J. Zinke, and T. R. McClanahan. (2012) Wicked social-ecological problems forcing unprecedented change on the latitudinal margins of coral reefs: the case of southwest Madagascar. <i>Ecology and Society</i> . 17:47.	Paper
Campbell, S.J., Cinner, J.E., Ardiwijaya, R.L., Pardede, S.T., Kartawijaya, T., Mukminin, A., Hoey, A.S., Pratchett, M.S., Baird, A.H. (2012). Avoiding conflicts and protecting coral reefs: Customary management of fishing gear protects habitat and fish biomass. <i>Oryx</i> , 46: 486–494.	Paper
Campbell, S.J., Hoey, A.S., Maynard, J.A., Kartawijaya, T. Cinner , J.S. and Baird, A.H. (2012). Weak compliance undermines the success of no-take zones in a large government-controlled Marine Protected Area. <i>PlosOne</i> , 7:e50074.	Paper
Campbell, S.J., Kartawijaya T., Yulianto, I., Prasetia R., and Clifton, J. (2013) Co-management approaches and incentives improve management effectiveness in the Karimunjawa National Park, Indonesia. <i>Marine Policy</i> .	Paper
Campbell, S.J., Mukminin, A., Kartawijaya, T., Huchery, C., Cinner, J.E. (2013) Changes in a coral reef fishery along a gradient of fishing pressure in an Indonesian marine protected area. <i>Aquatic Conservation of Marine and Freshwater Ecosystems</i> . DOI: 10.1002/aqc.2359	Paper
Cinner, J. C., T. R. McClanahan, S. Stead, N. A. J. Graham, T. Daw, J. Maina, A. Wamukota, O. Bodin, and K. Brown. (2012). Vulnerability of coastal communities to key impacts of climate change on coral reef fisheries. <i>Global Environmental Change</i> 22:12-20.	Paper
Cinner, J.E., Basurto, X., Fidelman, P., Kuange, J., Lahari, R. Mukminin, A. (2012). Institutional designs of customary fisheries management arrangements in Indonesia, Papua New Guinea, and Mexico. <i>Marine Policy</i> 36: 278–285.	Paper
Cinner, J.E., McClanahan, T.R., MacNeil, A., Graham, N.A.J., Daw, T.M., Mukminin, A., Feary, D.A., Rabearisoa, A.L., Wamukota, A., Jiddawi, N., Campbell, S.J., Baird, A.H., Januchowski-Hartley, F.A., Hamed, S., Lahari, R., Morove, T. and Kuange, J. (2012). Co-management can sustain fisheries and benefit livelihoods. <i>Proceedings of the National Academy of Science USA</i> . 109: 5219–5222.	Paper
Clark TR, Zhao J-X, Feng Y-X, Done T, Jupiter SD, Lough JM, Pandolfi JM (2012) Spatial variability of initial 230Th/232Th in modern Porites from the inshore region of the Great Barrier Reef. <i>Geochimica et Cosmochimica Acta</i> 78:99-118	Paper
Comeros-Raynal, M.T., Choat, J.H., Polidoro, B.A., Clements, K.D., Abesamis, R., Craig, M.T., Lazuardi, M.E., McIlwain, J., Muljadi, A., Myers, R.F., Nanola C.L.Jr., Pardede, S. Rocha, L.A., Russell B., Sanciangco, J.C., Stockwell, B., Harwell, H. and Carpenter, K.E. (2012). The likelihood of extinction of iconic and dominant herbivores and detritivores of coral reefs: The parrotfishes and surgeonfishes. <i>PLoSOne</i> 7(7): e39825	Paper
Darling, E., L. Alvarez-Filip, T. Oliver, T. McClanahan, and I. Cote. (2012) Evaluating life-history strategies of reef corals from species traits. <i>Ecology Letters</i> 15: 1378-1386	Paper
Dustan, P., Doherty, O. and Pardede, S. (2013). Digital reef rugosity estimates coral reef habitat complexity <i>PLoSOne</i> 8(2): e57386.	Paper
Fadli, N., Campbell, S.J., Ferguson, K., Keyse, J., Rudi, E. and Baird, A.H. (2012). Quantifying change in the community structure of an artificial reef. <i>Oryx</i> 46: 501–507.	Paper
Goetze JS, Fullwood LAF (2013) Fiji's largest marine reserve benefits reef	Paper

sharks. <i>Coral Reefs</i> 32:121-12	
Govan H, Jupiter S, Comley J (2012) Recognition and Support of ICCAs in Fiji. In: Kothari, A. with Corrigan, C., Jonas, H., Neumann, A., and Shrumm, H. (eds). <i>Recognising and Supporting Territories and Areas Conserved By Indigenous Peoples And Local Communities: Global Overview and National Case Studies</i> . Secretariat of the Convention on Biological Diversity, ICCA Consortium, Kalpavriksh, and Natural Justice, Montreal, Canada. Technical Series no. 64, 32 pp	Report
Guest, J.R., Baird, A.H., Maynard, J.A., Muttaqin, E., Edwards, A.J., Campbell, S.J., Yewdall, Y., Amri, A. and Chou, L.M. (2012). Changing patterns of coral bleaching susceptibility suggest an adaptive response to thermal stress. <i>PlosOne</i> 7(3): e33353	Paper
Jupiter S, Acton G, Caginitoba A, Koto K, Askew N, Wainiqolo G (2013) Strengthening conservation and management across the Mt. Navotuvotu-Mt. Kasi forest corridor: Final stakeholders report. Wildlife Conservation Society, Suva, Fiji, 18 pp	Report
Jupiter S, Saladrau W, Vave R (2013) Assessment of sea cucumber fisheries through targeted surveys of Lau Province, Fiji. Wildlife Conservation Society/University of the South Pacific/Fiji Department of Fisheries/Khaled bin Sultan Living Oceans Foundation, Suva, Fiji, 22 pp	Report
Jupiter SD, Weeks R, Jenkins AP, Egli DP, Cakacaka A (2012) Effects of a single intensive harvest event on fish populations inside a customary marine closure. <i>Coral Reefs</i> 31:321-334	Paper
Klein CJ, Jupiter SD, Selig ER, Watts M, Halpern B, Kamal M, Roelfsema C, Possingham HP (2012) Forest conservation delivers highly variable coral reef conservation outcomes. <i>Ecological Applications</i> 22:1246-1256	Paper
Knudby A, Jupiter S, Roelfsema C, Lyons M, Phinn S (2013) Mapping coral reef resilience indicators for management in Fiji. <i>Remote Sensing</i> 5:1311-1334	Paper
Makino A, Beger M, Klein CJ, Jupiter SD, Possingham HP (2013) Integrated planning for land-sea ecosystem connectivity to protect coral reefs. <i>Biological Conservation</i> 165:35-42	Paper
Maynard, J., Wilson, J., Campbell, S.J., Mangubhai, S., Setiasih, N., Sartin, J., Ardiwijaya, R., Obura, D., Marshall, P., Salm, R., Heron, S., and Goldberg, J. (2012). <i>Assessing coral resilience and bleaching impacts in the Indonesian archipelago. Technical Report to The Nature Conservancy with contributions from Wildlife Conservation Society and Reef Check Foundation Indonesia</i> . 62 pp.	Report
McClanahan TR, Donner SD, Maynard JE, MacNeil MA, Graham NAJ, Maina JM, Baker AC, Alemu J, Beger M, Campbell SJ, Darling ES, Eakin CM, Heron SF, Jupiter SD, Lundquist CJ, McLeod E, Mumby PJ, Paddock MJ, Selig ER, van Woelk R (2012) Evidence-based resilience assessments to support coral reef management in a changing climate. <i>PLoS ONE</i> 7:e42884. doi:42810.41371/journal.pone.0042884	Paper
McClanahan, T. R., and A. Humphries. (2012). Comparing life history and trophic succession models in predicting the recovery of fishes in coral reef fisheries closures. <i>Marine Ecology Progress Series</i> 469: 121-131.	Paper
Mills M, Adams VM, Pressey RL, Ban NC, Jupiter SD (2012) Where do national and local conservation actions meet? Simulating the expansion of ad hoc and systematic approaches to conservation into the future in Fiji. <i>Conservation Letters</i> 5:387-398	Paper
Roelfsema C, Phinn S, Jupiter S, Comley J, Albert S (2013) Mapping coral reefs at reef to reef-system scales, 10s-1000s km ² , using object-based image analysis. <i>International Journal of Remote Sensing</i> , doi:10.1080/01431161.01432013.01800660	Paper
Rudi, E., Campbell, S.J., Hoey, A.S., Fadli, N., Linkie, M. and Baird, A.H. (2012). The Coral Triangle Initiative: What are we missing? A case study from Aceh. <i>Oryx</i> 46: 482– 485.	Paper
Torres-Pulliza, D., Wilson, J.R., Darmawan, A., Campbell, S.J. & Andréfouët, S. (2013). Ecoregional scale seagrass mapping: A tool to support resilient MPA network design in the Coral Triangle Ocean & Coastal Management 80:55-64.	Paper
Tulloch VJ, Possingham HP, Jupiter SD, Roelfsema C, Tulloch AI, Klein CJ (2013) Incorporating uncertainty associated with habitat data in marine reserve	Paper

design. Biological Conservation 162:41-51	
Vukikomoala K, Jupiter S, Erasito E, Chand K (2012) An analysis of international law, national legislation, judgements, and institutions as they interrelate with territories and areas conserved by indigenous peoples and local communities. Report No. 19 Fiji, Natural Justice and Kalpavriksh, Bangalore and Delhi, 61 pp	Report
Weeks R, Jupiter SD (2013) Adaptive comanagement of a marine protected area network in Fiji. Conservation Biology DOI: 10.1111/cobi.12153	Paper
Yulianto I, Y. Herdiana, S.J. Campbell, P. Ningtias, A. Hermansyah, M.A. Halim. (2013). A Strategy to Achieve 20 Million Hectares for Indonesian Marine Protected Areas in 2020. Wildlife Conservation Society and Fisheries and Marine Protected Areas Governance Program, Bogor, Indonesia. 93pp.	Report
Zychaluk, K., J. F. Bruno, D. Clancy, T. R. McClanahan, and M. Spencer. (2012). Modelling regional coral-reef dynamics without mechanistic assumptions. Ecology Letters 15:151-158.	Paper

Journal Articles:

6. Please indicate upcoming coral reef-related meetings you or your organisation will attend

- 2nd Global Conference on Land - Ocean Connections (GLOC-2) October 2- 4 2013, Montego Bay, Jamaica
- 17th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (SBSTTA-17), 14-18 October 2013 Montreal, Canada
- 2nd Global Marine World Heritage Site Managers Conference, 17-20 October 2013, Corsica, France
- International Marine Protected Areas Congress, 21-27 October, Marseille, France
- 9th Pacific Island Conference on Nature Conservation and Protected Areas, 2-6 December, Suva, Fiji

Other: [\[Insert text here\]](#)