



Member's report on activities related to ICRI

Reporting period December 2015 – November 2016

1. **Contribution to the ICRI Plan of Action and GM.** *Your responses to the following questions will assist the Secretariat in assessing contributions towards the major themes of the current ICRI Plan of Action (<http://www.icriforum.org/icri-secretariat/current>) and objectives of the general meeting.*

- a. **Bleaching event**

The 2016 coral bleaching event affected the whole Western Indian Ocean, and as in past years since 1999, CORDIO has been active in both direct monitoring and coordinating general action. This activity was undertaken as part of Project 1 below, with the Indian Ocean Commission and implementing the strategy of the Nairobi Convention Coral Reef Task Force. A presentation on this bleaching work has been prepared and will be presented at the GM by the Indian Ocean Commission representative. The approach will also be brought into the plan for strengthening the GCRMN, in Project 2 listed below.

- b. **Nature-based Solutions to address Climate Change** - *Do you have some example(s) of Nature-based (coral reef and related ecosystems) Solutions to address climate change? If yes, could you please provide use some details?*

We are working on resilience-based actions to support Nature-based solutions to address climate change. These are described in the projects reported on in the previous members report, including:

- 3 - Resilient Coasts (Mangroves for the Future – East Africa)
- A - Our Sea Our Life (Mozambique)
- C - Mozalink (Mozambique Channel)
- D - Northern Mozambique Channel Initiative

- c. **UN Sustainable Development Goals** – *Do you have example(s) showing how coral reefs and related ecosystems address the SDG (SDG 14 but also other related ones such as SDG 1 – End poverty in all its form; SDG 2 – End hunger, achieve food security and improved nutrition...)*

Coral reefs are essential for many countries in meeting the SDGs, as they provide extensive ecosystem goods and services to nationally important coastal economies and 100s of millions of people globally. We have undertaken a regional ocean economy report for the Western Indian Ocean with WWF, which illustrates the key SDGs that coral reefs (and related ecosystems) support directly and for which urgent action is needed from the countries. We developed the figure below as part of a publication on pursuing a sustainable ocean economy based on coral reefs, and that ends poverty – most of the SDGs are implicated in some way, as well as key Aichi Targets.



d. **Upcoming events** - Do you plan to attend:

- November 2016 - Marrakech Climate Change Conference / The twenty-second session of the Conference of the Parties (COP 22) - NO
- December 4, 2016 to December 17, 2016 - Convention on Biological Diversity COP13 - NO
- June 2017 - Oceans & Seas Global Conference, Fiji - YES
- Other(s): Economist World Ocean Summit, Bali Indonesia, February 2017. POTENTIALLY

2. **Updates on your activities.** The following table is a summary of ICRI’s *Framework for Action* (FFA) and its four cornerstones. (The full text of the FFA is available in English, French, and Spanish at <http://icriforum.org/icri-documents/icri-key-documents/continuing-call-action-2013>).

Integrated Management	Objective	Manage coral reefs and related ecosystems using an ecosystem approach, recognizing place based activity; connectivity within and among ecological, social, economic, and institutional systems; as well as with attention to scale; resilience of ecological and social systems; and long-term provision of ecosystem services.
	General Approach	Integrated management, using a strategic, risk-based, informed approach, provides a framework for effective coral reef and related ecosystem management which supports natural resilience, ecosystem service provision, and enhances the ability to withstand the impacts of climate change and ocean acidification.
	Desired outcome	There is a demonstrable reduction in the threats to coral reefs and related ecosystems through management action.
Capacity Building	Objective	To build capacity in all facets of management of coral reefs and related ecosystems and support dissemination and application of best practices to achieve the widest possible engagement of all stakeholders in planning and management activities.
	General Approach	Continued collaboration, partnerships, outreach, information sharing and education to ensure the uptake of best practices and encourage behavioural change. This can only be successful if the diversity of cultures, traditions and governance among nations and regions are taken into account.
	Desired outcome	Persons who have influence in the management of coral reef and related ecosystems have the knowledge, tools and capital necessary to apply best practices, adapted to the cultural and socio-economic context.
Science & Monitoring	Objective	To support research and citizen science approaches to enable countries and communities assess and report on the status of and threats to their coral reefs and related ecosystems in a coordinated, comparable and accessible manner.
	General Approach	Research and monitoring programs are essential to ensure that management of coral reefs and related ecosystems is based on best available (scientific) information.
	Desired outcome	Knowledge of the status and trends in coral reefs and related ecosystems health is enhanced and used to inform planning and management, improving management

		outcomes.
Periodic Assessment (Review)	Objective	To engage in periodic review of the impact and effectiveness of all elements of management to enable evaluation and refinement of management measures in an adaptive framework.
	General Approach	Periodic assessments of management effectiveness and evaluation of projects and activities to ensure the efficacy of management tools and systems in tackling the range of pressures affecting coral reefs and related ecosystems and protecting the values associated with them.
	Desired outcome	Management processes and activities are regularly reviewed and improved using a structured approach, to enhance their ability to effectively reduce pressures and threats.

Using the table on the previous page, as well as the detailed descriptors of approaches and strategies available in the full text of the FFA as a reference, please give us an update on an activity/project/program(s) which has been particularly successful in your country/organization during this reporting period.

Project 1

Cornerstone(s) implemented through the project	Check all that apply: <input type="checkbox"/> Integrated Management <input checked="" type="checkbox"/> Capacity Building <input checked="" type="checkbox"/> Science & Monitoring <input checked="" type="checkbox"/> Periodic Assessment (Review)
Project Title	Regional reporting on the status and health of Western Indian Ocean coral reefs.
Location	Western Indian Ocean
Dates	2016
Main Organizer(s)	Indian Ocean Commission
Main Stakeholder(s)	Regional and National Coral Reef Task Forces and historical GCRMN monitoring and reporting teams.
Description of Project (Please elaborate on how the project implements the FFA cornerstones)	<p>CORDIO has been contracted by the Indian Ocean Commission under its Biodiversity Project to be the Technical Lead on the regional GCRMN reporting process for 2016-2016. This builds on the role that CORDIO has played in supporting regional monitoring and reporting since inception in 1999, and aligned with the GCRMN and as an ICRI Member since then. This work entailed:</p> <ul style="list-style-type: none"> Expanding and building on the coral bleaching alert tht CORDIO has run since 2009, to include an online reporting form. Teams from the region (and farther afield in the Indian Ocean) have used it extensively, and the data is submitted to the global repository for bleaching observations now maintained by NOAA Coral Reef Watch (and previously on ReefBase); Developing a model coral bleaching response plan customized to the region, and disseminating this through, e.g. the Reef Resilience Network (www.reefresilience.org); Providing training on coral bleaching monitoring methods, and preparing a quick guide and manual to provide coherent methods for basic, intermediate and advanced monitoring of coral bleaching; Compiling site-level summary data on the status of coral reefs from all participating organizations and countries in the WIO, for a 2016 GCRMN regional report for the WIO. Providing technical support through the Indian Ocean Commission and the Nairobi Convention Coral Reef Task Force for the above processes.
Outcome (Expected outcome)	<ul style="list-style-type: none"> Improved real-time reporting of bleaching and mortality from the mass bleaching event affecting the region. Regional report on the health of coral reefs in the Western Indian Ocean
Lessons learned	[Insert text here]

Related websites (English preferred)	[Insert text here]
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Project 2

Cornerstone(s) implemented through the project	Check all that apply: <input type="checkbox"/> Integrated Management <input type="checkbox"/> Capacity Building <input checked="" type="checkbox"/> Science & Monitoring <input type="checkbox"/> Periodic Assessment (Review)
Project Title	Developing a 2017-2020 workplan for strengthening the GCRMN
Location	Global
Dates	2016
Main Organizer(s)	Multiple partners, founded primary in the IUCN (Coral Specialist Group and GMPP)
Main Stakeholder(s)	GCRMN, GEOBON, GOOS, others
Description of Project (Please elaborate on how the project implements the FFA cornerstones)	<p>Following from work started and reported in the 2014-2015 reporting period, CORDIO (David Obura) has integrated the contributions of several global networks in a plan for maturing the GCRMN in line with existing global ocean observing and reporting systems. These are:</p> <ul style="list-style-type: none"> • GEOBON Global Marine BON (previously Working Group 5 on Oceans) – a part of GEO (Group on Earth Observations), tasked with identifying mechanisms for compiling biodiversity information to global levels to facilitate Convention reporting (CBD, IPBES, etc) and development of the Essential Biodiversity Variable concept. • GOOS BioEco Panel – a part of GEO (Group on Earth Observations) and the UNESCO Intergovernmental Oceanographic Commission, tasked with developing and supporting the maturation of observation systems providing data on the global ocean (Framework for Ocean Observations). Coral reefs confirmed as one of ten marine ecosystems with potential to achieve this, and a priority one for development • bioDISCOVERY/Future Earth – specializes in developing reporting and assessment ‘pipelines’ for ‘big data’ – e.g. the Global Biodiversity Outlook for the CBD (GBO3 and GBO4), and Future Earth is developing Knowledge Action Networks, with one focused on Oceans and potentially incorporating a coral reef theme. • IUCN Coral Specialist Group and three fish Specialist Groups all including reef associated fishes – GCRMN reporting is the foundation for IUCN Red Listing of species, and this can be formalized and extended to the upcoming Red List of Ecosystems and identification of Key Biodiversity Areas, providing outputs directly useful to countries’ decision-making. Supporting this workplan was confirmed through the Union (secretariat, members and commissions) at the World Conservation Congress, and in Motion 50 adopted at the congress “Coopération pour la protection des récifs coralliens dans le monde”.
Outcome (Expected outcome)	Revitalization w. GCRMN and global partners
Lessons learned	[Insert text here]
Related websites (English preferred)	[Insert text here]

Project 3

Cornerstone(s) implemented through the project	Check all that apply: <input type="checkbox"/> Integrated Management <input type="checkbox"/> Capacity Building <input checked="" type="checkbox"/> Science & Monitoring <input type="checkbox"/> Periodic Assessment (Review)
Project Title	Coral reef surveys and monitoring

Location	Various
Dates	2016
Main Organizer(s)	CORDIO with multiple partners
Main Stakeholder(s)	[Insert text here]
Description of Project (Please elaborate on how the project implements the FFA cornerstones)	<p>CORDIO has continued its primary work of monitoring and assessing resilience of coral reefs to support management and planning at sites, as technical contributors for partners on the ground. In 2016, the following surveys have been undertaken:</p> <ul style="list-style-type: none"> • <i>Isles Eparses</i> – coral reef and larger reef associated fish (including groupers) surveys through the SIREME programme led by IRD: Mayotte (May 2016) and Europa (November 2016) • <i>Moheli National Park</i> – coral reef surveys in collaboration with WWF Madagascar and the Mayotte National Park, supported by AfD (October 2016).
Outcome (Expected outcome)	[Insert text here]
Lessons learned	[Insert text here]
Related websites (English preferred)	[Insert text here]

Project 4

Cornerstone(s) implemented through the project	<p>Check all that apply:</p> <input type="checkbox"/> Integrated Management <input type="checkbox"/> Capacity Building <input type="checkbox"/> Science & Monitoring <input type="checkbox"/> Periodic Assessment (Review)
Project Title	Developing coral reef monitoring and management plans, and a coral collection facility, for the project “Expansion and Strengthening the Protected Area Subsystem of the Outer Islands of Seychelles and its Integration into the broader land and seascape project”
Location	Seychelles
Dates	2015-2016
Main Organizer(s)	Island Conservation Society, CORDIO East Africa
Main Stakeholder(s)	Government of Seychelles, UNDP-GEF project
Description of Project (Please elaborate on how the project implements the FFA cornerstones)	<p>Improved understanding of the status and diversity of coral reefs and associated resources (e.g. benthos, fish and macroinvertebrates) at the PA sites will lead to direct conservation benefits, including the design of a coral reef conservation plan for each island, the boundary setting and zoning of the protected areas, and the possible designation of specific high protection zones within the Outer Islands PA network. The information also will help to determine actual and potential climate change impacts (e.g. extent and degree of bleaching) and to identify coral reefs with high resilience to climate change impacts, which may be areas for additional protection measures. Finally, these activities will help to establish a national pool of trained coral reef surveyors (building on the small existing pool of persons at NGOs, SFA and SNPA). The project will:</p> <ul style="list-style-type: none"> • Develop a protocol for the monitoring and conservation of coral reefs on the 4 focus sites of the Outer Islands Project (Farquhar, Poivre, Desroches, Alphonse). The purpose of the monitoring protocol is to provide indicators that will help assess and establish a baseline to improve the understanding of the current status and diversity of Coral Reefs at the PA sites • Develop a Coral Reef conservation management plan for each PA site

	<p>under the OI project (Farquhar, Poivre, Desroches, Alphonse). The management plan must consider current management capacity of the 4 sites and aim to compliment upcoming boundary setting and zoning of the Protected Area network</p> <ul style="list-style-type: none"> • Create a national coral collection facility and train relevant personnel contributing to the functioning of the facility, with the University of the Seychelles' Blue Economy Institute.
Outcome (Expected outcome)	<ul style="list-style-type: none"> • monitoring protocols for coral reefs on the 4 focus sites of the Outer Islands Project (Farquhar, Poivre, Desroches, Alphonse) • Coral Reef conservation management plan for each PA site under the OI project (Farquhar, Poivre, Desroches, Alphonse) • Plans and training to develop a national coral collection facility
Lessons learned	[Insert text here]
Related websites (English preferred)	[Insert text here]

Ongoing projects from the last Members report include:

- 3 - Resilient Coasts (Mangroves for the Future – East Africa)
- A - Our Sea Our Life (Mozambique)
- C – Mozalink (Mozambique Channel)
- D - Northern Mozambique Channel Initiative

Note: If you have more activities/projects/programs you would like to report on or share with other members, please duplicate the table above and fill it in for as many projects as you wish.

3. Publications. Please list relevant publications/reports you have released during this reporting period.

Title (incl. author and date)	Website URL if available	Type of publication (Paper, report, etc.)
Johann Bell, William Cheung, Sena De Silva, Maria Gasalla, Stewart Frusher, Alistair Hobday, Vicky Lam, Patrick Lehodey, Gretta Pecl, Melita Samoilyls and Inna Senina (2016) Impacts and effects of ocean warming on the contributions of fisheries and aquaculture to food security (Chapter 4.5). In: Laffoley, D., & Baxter, J.M. (editors). 2016. Explaining ocean warming: Causes, scale, effects and consequences. Gland, Switzerland: IUCN. pp 409-450. http://dx.doi.org/10.2305/IUCN.CH.2016.08.en		Report
Chabanet P., Bigot L., Nicet J.B., Durville P., Massé L., Mulochau T., Russo C., Tessier E., & Obura D.O. (2015) Coral reef monitoring in the Iles Eparses, Mozambique Channel (2011-2013). Acta Oecologica, 1–10.		Paper
Crochelet E, Roberts J, Lagabrielle E, Obura DO, Petit M (2016) A model-based assessment of reef larvae dispersal in the Western Indian Ocean reveals regional connectivity patterns – Potential implications for conservation policies. DOI: 10.1016/j.rsma.2016.06.007		Paper
Miloslavich, Patricia & 41 others (incl. D. Obura) (2016) Extent of Assessment of Marine Biological Diversity. In: The First Global Integrated Marine Assessment - World Ocean Assessment I). Chapter 35. (Coordinators) Lorna Inniss and Alan Simcock The Group of Experts of the Regular Process. C. United Nations. http://www.un.org/Depts/los/global_reporting/WOA_RegProcess.htm		Paper
Obura, D. et al. 2016. Reviving the Western Indian Ocean Economy: Actions for a Sustainable Future. WWF International, Gland, Switzerland. 64 pp.		Report
Osuka K., Kochzius M., Vanreusel A., & Obura D.O. (2016) Linkage between fish functional groups and coral reef benthic habitat composition in the Western Indian Ocean. Journal of the Marine Biological Association of the United Kingdom, 1–14. http://dx.doi.org/10.1017/S0025315416001399		Paper
Samoilyls M.A., Osuka K., Maina G.W., & Obura D.O. (2017) Artisanal fisheries on Kenya's coral reefs: Decadal trends reveal management needs. Fisheries Research, 186, 177–191.		Paper
Smith JE, Brainard R, Carter A, Grillo S, Edwards C, Harris J, Lewis L, Obura DO, Rohwer F, Sala E, Vroom PS & Sandin S. (2016) Re-evaluating the health of coral reef communities: baselines and evidence for human impacts across the central Pacific. Proc. R. Soc. B 283: 20151985. http://dx.doi.org/10.1098/rspb.2015.1985		Paper
Snelgrove, Paul, & 28 others (incl. D. Obura) (2016) Global Patterns in Marine Biodiversity. In: The First Global Integrated Marine Assessment - World Ocean Assessment I). Chapter 34. (Coordinators) Lorna Inniss and Alan Simcock The Group of Experts of the Regular Process. C. United Nations. http://www.un.org/Depts/los/global_reporting/WOA_RegProcess.htm		Paper

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

Member type (Country / Organization):	Organization
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Focal Point 1:	
<i>Name:</i>	David Obura
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