

A New Direction for the GCRMN For Discussion

INTRODUCTION

Since ICRI's inception of the GCRMN in 1996, the network has been striving to promote global coral reef monitoring, raise awareness on the current status of corals and coral reefs, and provide data to assist resource managers in coral reef conservation. The GCRMN has contributed enormously in alerting the world to the increasing degradation of coral reefs worldwide. It has been increasingly evident, however, that there is a need to improve the quality of the information that is provided.

The transition from the former GCRMN network to stewardship by IUCN presents an opportunity for real change to move the Network in a new direction. The new GCRMN, apart from the initial objectives, aims to sharpen the concept of coral reef monitoring to produce information that will help scientific and management communities through the following objectives and actions. The new GCRMN will remain highly dependent on a regional approach through meetings and enhanced, routine communication with regional networks and national governments.

GCRMN ACTIVITIES AND PRODUCTS

OBJECTIVE 1: To reorient, re-establish and revitalize the GCRM Network

In order to revitalize the operations of GCRMN, the whole network needs re-evaluation and restructuring, especially enhancing regional and national communications. A GCRMN Technical Advisory Group (TAG) will be set up to directly support the GCRMN Coordination Team and supplant the older Scientific and Technical Advisory Committee (STAC). The first meeting of this advisory group will allow members to re-establish the objectives of GCRMN and the subsequent action plans.

OBJECTIVE 2: To identify processes and trends in global coral reefs

The nature of coral reef monitoring historically has made it hard to link data sets from research studies, and thus it is difficult to accurately assess the trends of coral reefs. To address this situation, the new GCRMN has already established the project '*Enhancing the management relevance of reef monitoring in a changing world*' (See Annex I), to construct a comprehensive publicly available online database of high quality scientific data on the distribution and abundance of coral reefs, algae, fishes, and key invertebrates from reef sites worldwide.

OBJECTIVE 3: To standardize, improve and promote coral reef monitoring to the extent needed based on results from Objective 2

A key objective of the new GCRMN is to lead reef monitoring in various parts of the world to generate comparable, useful and high quality information on the status of coral reefs in each region. The review in 2001 highlighted that the information provided by the 'Status of the Coral Reefs' reports are confined to anecdotal consensus science due to the highly varying quality of the data inputs. The great challenge lies in having a protocol that can be realistically implemented throughout the regions.

The initial meeting of the Technical Advisory Group will address the issue by having lead scientists and managers to identify/re-create an improved protocol from the existing techniques that can be practically adapted to suit varying local situations. The protocol, endorsed by the GCRMN, will be sent out to the coral reef monitoring network across the globe to be incorporated within monitoring programs and reef-related activities.

OBJECTIVE 4: To assess and report the current status and future trends of coral reefs

A major focus of the GCRMN is to report on reef status to support managers in making informed decisions based on solid scientific information and understanding of the systems. The Status Report Series has been the key tool of GCRMN in achieving this objective, yet the review has identified various factors such as pressure of producing reports in a short amount of time and rates of information collection that has negative effects on the quality and usefulness of the reports.

The new GCRMN will reinvent various aspects of the Network, including method/protocol standardization, focused reporting (See Annex III) and to redesign processes of synthesis to transfer raw data into systematic, meaningful products that allow managers, scientists and the public to make more effective use of findings. In addition, GCRMN will support regional networks in producing regional reports on the status of the coral reefs and to disseminate information at local, national, regional and global levels.

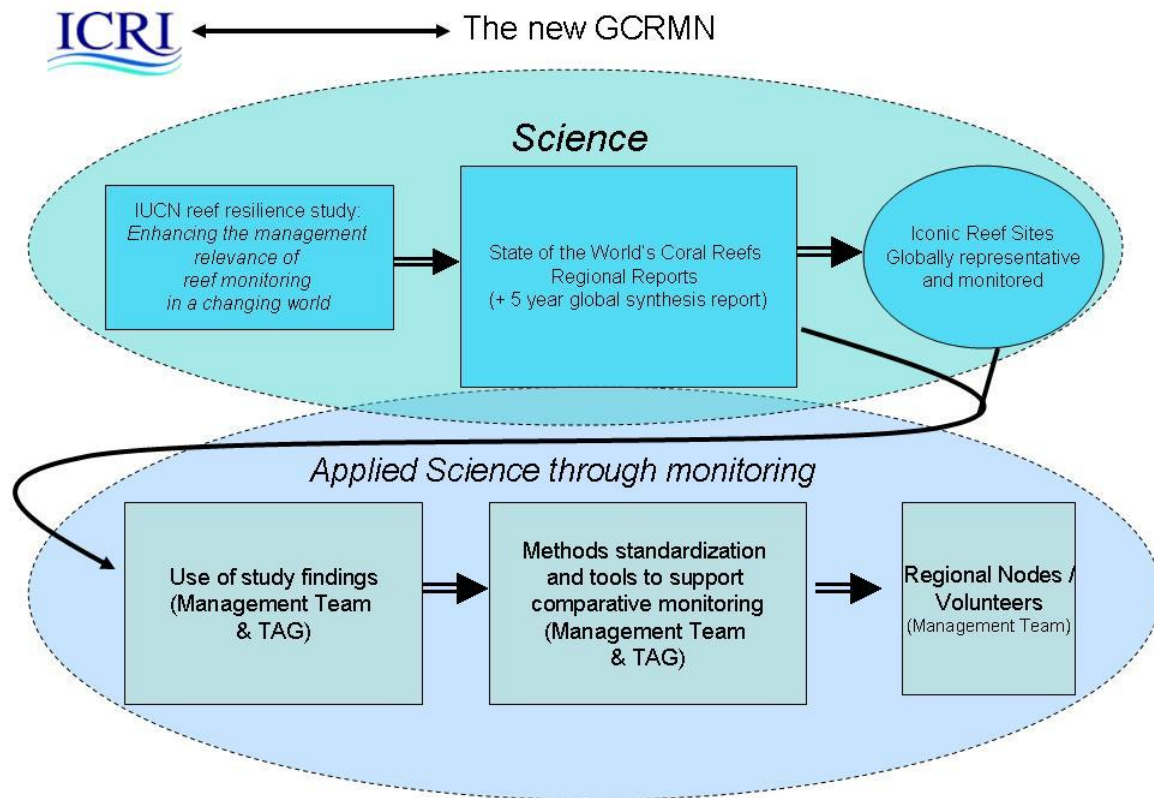
OBJECTIVE 5: To enhance the communication between the GCRMN core coordination team and ICRI

The effectiveness of the new GCRMN will be determined by the degree to which effective communication and credible monitoring information can be regularly shared with ICRI, through ICRI member's relationships with other international programs and partners, and within each of the regions. The process will be led by the basic principle of adaptive management through rigorous data gathering and assessment, where open and transparent discussions on the implications of monitoring results and their reporting and use will be emphasized. Regional meetings and workshops will serve as the platforms for engagement. Historically, there have been repeated inconsistencies with the composition and convening of the ICRI-GCRMN management group. This warrants re-evaluation of its composition and role in serving as the liaison to ICRI, and in providing guidance to the Coordination Team and high-level International support. To this end, this concept seeks the participation of the chair of the ICRI-GCRMN Management Group, and regional attendance of ICRI representatives. The GCRMN will continue to provide regular progress reporting to ICRI during its annual meetings.

GCRMN ACTIVITIES AND PRODUCTS

Activities	Tentative (Delivery) Date
<i>Objective 1: To reorient, re-establish and revitalize the GCRM Network</i>	
Activity 1.1: Propose and accept new GCRMN model at the ICRI Meeting	December 2011 (ICRI Meeting)
Activity 1.2: Form the new GCRMN Technical Advisory Group (TAG)	December 2011 (ICRI Meeting)
Activity 1.3: Convene TAG meeting and establish GCRMN objectives and work plan	Spring 2012 (Panama/TAG Meeting)
Activity 1.4 Review existing nodes, network members and develop network capacity	Fall 2012
Activity 1.5 Fundraise for GCRMN activities proposed herein	Continuous throughout project
<i>Objective 2: To identify processes and trends in global coral reefs</i>	
Activity 2.1: Collect global coral reef monitoring data set	December 2011 (Caribbean and Eastern Pacific)
Activity 2.2 Convene expert workshop in Panama on Caribbean and E. Pacific coral reefs	Spring 2012 (Panama/TAG Meeting)
Activity 2.3 Identify key coral reefs as iconic sites for detailed monitoring studies	Spring 2012 (Panama/TAG Meeting)
Product: IUCN report on the history and status of Caribbean and E. Pacific coral reefs	End of 2012
Product: Scientific paper on the regional status of the Caribbean and E. Pacific coral reefs	End of 2012
Product: Indian Ocean, Pacific Ocean and Australasia regions will be produced respectively	2013-2015
Product: Global synthesis and policy paper on coral reef resilience and management	2016
<i>Objective 3: To standardize, improve and promote coral reef monitoring</i>	
Activity 3.1: Establish standardized monitoring protocol based on existing methods and results from Objective 2 (First TAG Meeting)	Spring 2012 (Panama/TAG Meeting)
Activity 3.2: Explore monitoring measurements to improve monitoring assessments, including measures for coral reef biodiversity	
Activity 3.3: Work with regional representatives to ensure consistent quality of monitoring data set	
<i>Objective 4: To assess and report the current status and future trends of coral reefs</i>	
Activity 4.1 Report global coral reef status through publications of 'Status of the World's Coral Reefs'	Continuous throughout project
Activity 4.2 Set up new systems of quality control, reporting and synthesis of monitoring data set	Fall 2012
Activity 4.3 Targeted public out-reach and disseminate information collected	Major conferences such as ICRS
<i>Objective 5: To enhance communication between the GCRMN Core Coordination Team and ICRI</i>	
Activity 5.1: Attendance of TAG meetings by Chair of GCRMN Management Group and ICRI representative	TAG Meetings
Activity 5.2 GCRMN progress reports at annual ICRI meetings	Annual ICRI Meetings

PROPOSED GCRMN STRUCTURE



A) GCRMN Core Coordination Team

- Jeremy Jackson, **Lead Scientist and Spokesperson**
- Andy Hooten, **Global Coordinator**
- Vivian Lam, **Deputy Global Coordinator**
- Carl Gustaf Lundin, **Director IUCN GMPP and Senior Advisor, GCRMN Core Coordination team**

The GCRMN Core Coordination Team will serve as the routine coordination mechanism for this new model. This team will seek regular technical input from the TAG to help address the objectives and perform the activities and tasks. The core team will be responsible for producing the products defined in this strategy, and the team will advise ICRI, through the ICRI-GCRMN management group. Coordination team members will report to ICRI in the form of progress reporting, regional and global state-of-the-reefs reporting, as well as other technical requests or resolutions from ICRI. The management team will also work to identify synergies with other programs/organizations.

B) Technical Advisory Group (TAG)

- Constitutes world leaders of managers and scientists
- Selected by the GCRMN Core Coordination Team
- Chair of ICRI-GCRMN Management Group (Ex-officio participation)

Function: A body that supports the core coordination team by providing scientific and management-relevant advice in operationalizing the new GCRMN.

Membership: Exclusive, selected by the core GCRMN Coordination Team

Selection criteria: World leading scientists (biophysical, social (i.e. the SocMon Network) and fisheries) actively participating in coral reef monitoring efforts around the world, as well as coral reef managers

Risk Analysis: May be difficult to motivate top quality professionals to contribute voluntarily and difficult to achieve strong momentum to achieve results

Strategies to Reduce Risk: Incentives to increase member commitment in being part of the TAG.

C) GCRMN Regions

- Comprised of 4 regions and further divided into sub-regions. The regions were defined to address TAG representation and future assessment and reporting.

<i>Tropical Americas</i>	<i>Indian Ocean Region</i>	<i>Australasia</i>	<i>Wider Pacific Region</i>
1. Lesser Antilles	1. Arabian Sea	1. Coral Triangle	1. Micronesia
2. Northern Caribbean and Western Atlantic	2. Eastern Africa	2. Other parts of Asia	2. Southwest Pacific
3. Western Caribbean	3. Gulf of Oman	3. Australia	3. Polynesia Mana
4. Southern Tropical America	4. Indian Ocean Islands		4. US Pacific
	5. Persian Gulf		
	6. Red Sea and Gulf of Aden		
	7. South Asia		

ANNEX I: Enhancing the management relevance of reef monitoring in a changing world

Objectives: To determine the geographic and temporal variability in the decline of coral reef ecosystems around the world and the extent to which local protection of reefs from overfishing and pollution may confer resistance of corals to climate change and/or increased ability of corals to recover following chronic or severe impacts such as coral bleaching, disease, or extreme natural disturbances.

Strategy: Monitoring should always be informed by the needs of the managers, but coral reef monitoring is to be kept an independent aspect as to enable an objective assessment of coral reef status.

Data Collection: High quality monitoring data on corals, algae, fish, oceanographic data, levels of human protection, exploitation and development (social and economic indicator, of ecosystem services (e.g. SocMon), and the distribution of benefits within adjacent communities). A possible further expansion is to include coral reef biodiversity one of the bases for ecosystem health. The lack of biodiversity component within existing monitoring protocols is a major weakness. This aspect has potential synergies with the continuation of the Census of Marine Life led by STRI and AIMS.

Regions: 1) Caribbean and Eastern Pacific 2) Indian Ocean 3) Pacific Ocean 4) Australasia

ANNEX II: Identify special reefs as iconic sites

Function: Iconic sites to be given intensive scientific attention where reefs are documented in real time and intensively monitored, additional marketing purposes

Sites: Selected by GCRMN-TAG members

Selection Criteria: Key reef areas attached to frontline institutions have the capacity to provide funding, infrastructure and manpower

Potential collaborators: STRI, GBRMPA, CARMABI

ANNEX III: Status and Outlook of the World's Coral Reefs

Structure: Concise regional report on coral reef status and forecasted trends

Design: Format to be redesigned and may include tools such as Scorecards (e.g. Healthy Reefs for Healthy People Initiative), online dissemination, printed executive summaries and multimedia pathways

Regions: 1) Tropical Americas 2) Indian Ocean 3) Australasia 4) Wider Pacific Ocean

Data set: High quality quantitative data set from all regions

Timeframe: Regional report once every 4 years, it may not necessarily be in the order above but once established will be rotational. Year 5 would represent a global report of the global coral reef status that summarizes each of the preceding reports and provides a global overview of status and trends.