

Improving Long-term Coral Reef Monitoring in the Wider Caribbean Region: Initial GCRMN-Caribbean Accomplishments

Améliorer le Suivi à Long Terme des Récifs Coralliens dans la Région des Caraïbes: Progrès Initiaux du GCRMN Caraïbes

Mejorar el Monitoreo a Largo Plazo de los Arrecifes de Coral en el Caribe: Avances Iniciales del GCRMN Caribe

JULIE BELMONT¹, MARIA PENA²,
ALESSANDRA VANZELLA-KHOURI³, and RUBEN TORRES⁴

¹*CAR-SPAW, Parc National de la Guadeloupe - Montéran Saint-Claude, Guadeloupe 97120 France (FWI).*

²*CERMES - University of West Indies, St. Michaels, Barbados.*

³*UNEP - CEP SPAW Secretariat, UNEP CAR/RCU, 14-20 Port Royal Street, Kingston, Jamaica.*

⁴*Reef Check Dominican Republic, Prol Fantino Falco #5, Santo Domingo, Dominican Republic.*

EXTENDED ABSTRACT

Long-term and robust coral reef monitoring coupled with strategic reporting are essential drivers for ecosystem-based management and regional policy processes. The Global Coral Reef Monitoring Network (GCRMN) was established to support the International Coral Reef Initiative (ICRI)'s Call to Action and Framework for Action in 1994. The GCRMN worked through regional networks, comprising a variety of institutions, with the aim of strengthening the provision of the best available scientific information and communication on the status and trends of coral reef ecosystems, for their conservation and management. Since its inception the Wider Caribbean has been participating in GCRMN through the regional network and sub-regional nodes, coordinated through UNEP's Caribbean Environment Programme (CEP), which also serves as the regional focal point for ICRI.

In 2014, The Global Coral Reef Monitoring Network (GCRMN) report Status and Trends of Caribbean Coral Reefs 1970 - 2012 highlighted the weaknesses of regional coral reef monitoring in the Caribbean. To address the urgent need for more effective coral reef monitoring and reporting UNEP-CEP and the Regional Activity Center for the Protocol Concerning Specially Protected Areas and Wildlife (SPAW-RAC) took the initiative in 2014 to revitalize and strengthen the Caribbean component of the GCRMN, to ensure the collection of useful and accessible data that can effectively reveal the status and trends of the coral reefs in the region.

The foundation for restructuring the network was launched in August 2014, during a workshop held in Curacao, along with concrete proposals for improvements in data collection, archiving and communication. Several technical and scientific solutions have been proposed to address the lack of information and dissemination, and inconsistency in applying monitoring methods and approaches throughout the region. (UNEP-CEP Report, Curacao 2014)

The reactivated GCRMN-Caribbean is thus an open network of coral reef scientists, managers and government expert representatives involved with coral reef monitoring in the region, led by a Steering Committee with the support of UNEP-CEP and the SPAW-RAC as regional coordinator. Since 2014, the expert Steering Committee with support from members-at-large have enabled the network to achieve substantial progress and the first two years of the GCRMN- Caribbean has seen the confirmation of a dynamic network, which has been bolstering its presence and regional acknowledgement.

After several rounds of review, along with field testing by coral reef practitioners at several sites and last improvements through consultations (GCRMN-Caribbean workshop, April 2016), the GCRMN-Caribbean baseline scientific monitoring guidelines for Biophysical Monitoring have been finalized in 2016, endorsed by the GCRMN-Caribbean Steering Committee and presented regionally (SPAW Scientific Technical Advisory Committee, November 2016) and internationally (ICRI 31st Meeting, November 2016 Paris). Those guidelines provide a multi-level framework for existing and developing monitoring programmes to contribute data that support a regional understanding of status and trends of Caribbean coral reefs which will help guide management and decision-making .

The GCRMN-Caribbean also recognizes the importance of using an integrated approach to coral reef monitoring and seeks to promote the systematic implementation of a monitoring of social science indicators in conjunction with biophysical monitoring, in order to enhance the ability to make connections and inferences between observed changes in the coral reef ecosystem quality and human and social parameters. The GCRMN-Caribbean Socio economics monitoring guidelines are presently in the process of endorsement by the Steering Committee , in view of regional presentation at the SPAW Conference of the Parties in 2017.

Of particular importance, the GCRMN-Caribbean seeks to help reinforce existing national coral reef monitoring programmes and to support the development of new ones where needed. Caribbean Governments are invited to take part in this regional effort, by encouraging their relevant Departments and partners to use the GCRMN-Caribbean biophysical monitoring guidelines, as well as to request assistance and support from this expert network at their convenience.

The GCRMN-Caribbean Partners supports Coral reef monitoring capacities reinforcement throughout the region, and develops actions for coral reef practitioners with a special focus on MPA managers. The first GCRMN-Caribbean training

workshop was held in Jamaica, April 2016. Thirty-five coral reef scientists and coastal managers of the Wider Caribbean gathered at the Discovery Bay Marine Laboratory, Centre for Marine Sciences, University of the West Indies, to participate in this scientific capacity-building event « GCRMN-Caribbean Guidelines Capacity Building Workshop: Towards comprehensive coral reef monitoring ». This five-day training workshop introduced participants to the GCRMN-Caribbean bio-physical guidelines and socio-economic monitoring framework, as a mean to increase their capacity for effective integrated coral reef monitoring through the use of bio-physical and socio-economic data in coastal management decision-making for improved standardized and strategic reporting at the regional level. Led by a team of coral reef scientists and experts from the Centre for Resource Management and Environmental Studies (CERMES) at The University of the West Indies (UWI); Scripps Institution of Oceanography, University of California, San Diego; the Waitt Institute, Reef Check Dominican Republic; Universidad Simon Bolivar; and the NOAA Coral Reef Conservation Program, the participants engaged in one of two training components, respectively dedicated to GCRMN-Caribbean bio-physical and socio-economic monitoring (SocMon) guidelines, and benefited from several opportunities during plenary sessions for sharing experiences from each component in an effort to further develop integrative aspects of coral reef monitoring. This workshop was recognized as a real opportunity to strengthen the integration of all the participants in this Caribbean regional network, to train and identify future trainers, especially for future GCRMN-Caribbean workshops, to build new long-term collaborations between islands and reinforce territorial networks. The majority of the participants have been following up the training with monitoring actions on their territory and area of influence.

As part of their mandate the GCRMN-Caribbean Steering Committee and the regional coordinator have been reinforcing the communication aspects, though the development of a number of tools (videos, flyers, meetings presentation) and took advantage of the growing network to reinforce experience sharing. The GCRMN-Caribbean has been participating in and supporting partners meetings and workshops, and collaborates with major Caribbean and International programmes (GCFI, ECMMAN/TNC, AGRRA, UNEP Regional Seas Partnership for Coral Reef, CLME+). The exchange online Platform for the GCRMN-Caribbean has been very active and support regular information dissemination, experience sharing, continuous technical assistance and advices. The forum is 'open' to all interested Coral reef actors, and hosts different technical discussions, following questions and information sent by the members. It aims in priority to exchange on monitoring methods, best practices, to provide advices, to circulate general information such as funding calls, or relevant fora and conferences. 86 persons are currently on this forum.

In 2017, following recommendations of the Steering Committee, the GCRMN-Caribbean will focus on the following key aspects in order to pursue its mission of improving coral reef monitoring in the wider Caribbean: data collection improvement through capacity building

activities; explore collaboration with citizen science monitoring organizations; reinforce and test of the integrated approach; set up of an effective mechanism and platform for data archiving and analysis, including data sharing policies; in view of producing the next regional report in 2018.

KEYWORDS: Coral reef, GCRMN-Caribbean, monitoring

LITERATURE CITED

- UNEP-CEP / SPAW-RAC /Ministry of Economic Affairs of the Netherlands. 2014. Report of the Workshop of GCRMN for the Wider Caribbean: Review, improve and revitalize the network and the nodes for more effective coral reef monitoring and data management Curaçao "- Curacao, 6-8 August 2014.
- GCRMN-CARIBBEAN GUIDELINES FOR CORAL REEF BIOPHYSICAL MONITORING - UNEP(DEPI)/CARWG.38/INF.17. 2016. Seventh Meeting of the Scientific and Technical Advisory Committee (STAC) to the Protocol Concerning Specially Protected Areas and Wildlife (SPAW) in the Wider Caribbean Region.
- GCRMN-Caribbean Guidelines Capacity Building Workshop: Towards comprehensive coral reef monitoring - 18-22 April 2016, Discovery Bay Marine Laboratory, Centre for Marine Sciences, University of the West Indies (Report in progress) <http://www.car-spaw-rac.org/?First-GCRMN-Caribbean-integrated.665>.