



GLOBAL CORAL REEF MONITORING NETWORK (GCRMN) SOUTH ASIA SEA
REGIONAL WORKSHOP
MALÉ, REPUBLIC OF MALDIVES
28 – 29 JANUARY 2020

REPORT OF PROCEEDINGS
(Last updated: September 30th 2020)

Report prepared by:

Nizam Ibrahim & Aminath Angeela

1. INTRODUCTION

Maldives Marine Research Institute of the Ministry of Fisheries, Marine Resources and Agriculture hosted the regional workshop of the Global Coral Reef Monitoring Network (GCRMN)'s South Asian Seas (SAS) Region for gathering regional long-term coral reef monitoring data. The workshop was held in Malé, Republic of Maldives, from 28 to January 29th 2020. The workshop was supported by the International Coral Reef Initiative (ICRI), the Government of Sweden and the Principality of Monaco. The participating countries (India, Sri Lanka and the Maldives) were represented by scientists and coral reef experts engaged in the long-term coral reef monitoring programmes within their respective countries. Representatives from the South Asia Cooperative Environment Programme (SACEP) also participated in the workshop. In addition, Mr. Tadashi Kimura from the Japan Wildlife Research Centre and coordinator of the GCRMN Pacific node participated as a special invitee to share his experience in strengthening regional coral reef monitoring. A complete list of participants is included in Annex 1 of this report.

This workshop was one of a series of workshops organised by ICRI in preparation for the 2020 GCRMN Global Report on Coral Reef Status and Trends initially planned to be launched in August 2020 at the Our GCRMN South Asia Seas Regional Workshop 2020, Maldives, Report of proceedings

Ocean Conference in Palau. The workshop was facilitated by the global coral reef coordinator of GCRMN Dr David Souter.

The agenda for the workshop was unanimously adopted, with no revisions to the agenda that was shared (Annex 2).

2. OBJECTIVES

1. To compile regional coral reef monitoring data from the South Asian Seas (SAS) Region for the Global Coral Reef Status Report to be launched in October 2020, through discussions and data shared among experts within the region.
2. To facilitate dialogue between the countries in the SAS Region on increasing collaboration and corporation on conservation of coral reefs.
3. To brief participating countries the format and structure of the global synthesis report which will result from the regional data call and gathering workshops organised by GCRMN.
4. To facilitate dialogue between the coral reef managers and scientists on increasing collaboration and corporation in the SAS region.

3. PROCEEDINGS

3.1. DAY 1 (TUESDAY JANUARY 28TH 2020)

3.1.1. OPENING CEREMONY

The ceremony began with welcome remarks by Shafiya Naeem, Acting Director General of MMRI.

The welcome remarks were followed by opening remarks by Her Excellency Zaha Waheed, Minister of Fisheries, Marine Resources and Agriculture of the Republic of the Maldives. Minister Waheed expressed her pleasure of hosting the workshop in the Maldives, one that would contribute to a global report on the status of coral reefs globally, being published over a decade after the last such report. She also highlighted that data compiled from a series of workshops such as this workshop would be an important publication that would inform policymakers to plan the best measures to protect coral reefs in a time where local and global reefs are endangered, asserting that climate change and its associated impacts were the biggest threat to the coral reef systems around the world. She continued noting that this regional workshop was a significant step in informing Governments on the long term trends of coral reefs, and empowering nations to adopt climate change adaptation measures and protection of key coastal marine ecosystems toward achieving United Nations Sustainable Development Goals, SDG13 and SDG14. Minister Waheed recognised the challenges in achieving these goals even though the Maldives has achieved many milestones on marine protection and conservation. She expressed her wish to increase local capacities to tackle these challenges through research collaborations and gain a better understanding of the ocean. She revisited the remarks made by the President of the Republic of Maldives, His Excellency Ibrahim Mohamed Solih at the 74th UN General Assembly regarding the need to ensure that economic development in the Maldives follows ocean-friendly policies and explained the works initiated under the Blue Prosperity Coalition (BPC) to formulate a comprehensive and science-driven marine spatial plan that will guide the decisions made on the future

development of the country. She also noted that the Maldives is working on identifying and establishing ecologically significant marine areas that would be protected from human activity.

Minister Waheed concluded her remarks by thanking all participants, GCRMN and all regional scientists for the work they do to enrich understanding of the ocean and reiterated her hope that the collective effort and work will lead to the flourishing of coral reef systems across the world.

3.1.2. WORKSHOP SESSIONS

The sessions began with a presentation by Dr David Souter, the GCRMN coordinator, explaining the aims and objectives of the workshop and introduced ICRI, GCRMN and its implementation and governance. Country presentations followed a brief Q&As on the framework of GCRMN and its global chapters.

COUNTRY REPORTING ON CORAL REEF MONITORING EFFORTS

A. Status of coral reefs in India: ZSI's initiative on monitoring

Dr Raghunathan Chelladurai, Director of Zoological Survey of India presented on the status of coral reefs in India and highlights of Zoological Survey of India's initiative on coral reef monitoring, with information on coral diversity, protected areas and a comprehensive comparison of coral reefs of the Andaman and Nicobar Islands. He gave a brief history of coral bleaching events that had a significant impact on the coral reefs of India and highlighted the coral restoration program of his organisation. He also presented on permanent monitoring plots in Andaman and Nicobar islands from 1998 to 2018. He then extended his talk on the coral trajectory and impacts of coral bleaching events on the coral cover including the coral reefs of Lakshadweep, Gulf of Kachchh and Gulf of Mannar. In his talk he highlighted threats of the invasive species, *Carijoa riisei* on the reefs: *C. riisei* is a soft coral which is identified as invasive species from five localities of Andaman & Nicobar Islands.

B. Status of coral reefs of Gulf of Mannar, India

Dr Patterson Edward Jasperkalam from Suganthi Devadasan, Marine Research Institute, focused his talk on Status of coral reefs of the Gulf of Mannar, India. While presenting on the coral reef monitoring efforts in the Gulf of Mannar, Southern Tamil Nadu Protected Area, he emphasised on the vital significance of the Gulf of Mannar protected area and the conservation status. Dr. Jasperkalam presented the change in coral cover and bleaching impact on 21 islands surveyed. In addition, he looked at coral diseases and algal cover change and algal interaction between hard corals in the monitoring area.

C. Activities of IUCN Sri Lanka in the conservation of coral reefs

Mr Arjan Rajasuria, Coordinator of the Coastal and Marine Program, IUCN Sri Lanka, presented on activities of the IUCN Sri Lanka on conservation of coral reefs with a focus on the activities they carried out from 1998. Activities included a survey of coral reefs in Palk Bay and Palk Strait from 2015-2017. He also spoke about the coral reef-based ecosystems such as seagrass meadows. Mr Rajasuria highlighted the conservation activities that would take place in designated conservation areas.

D. Status of coastal marine ecosystems in Sri Lanka concerning global microbialization

Dr Mohamed Farook Mohamed Fairoz, Dean of Faculty of Fisheries and Ocean Science, Ocean University of Sri Lanka, presented on the status of coastal marine ecosystems in Sri Lanka concerning global microbialization from 2005 to 2006. His talk included the reef status of eight locations from Sri Lanka. Furthermore, Dr Fairoz spoke about more recent findings from the 2016-2018 coral reef monitoring effort; this was part of another extensive study done to understand the observed shift in ecosystem trophic structure towards higher microbial biomass and energy use.

E. The Blue Resources Trust (BRT) coral reef research program in Sri Lanka

Mr Nishan Perera, from Blue Resources Trust (BRT) of Sri Lanka, presented on the nationwide coral reef research program of BRT. Mr. Perera discussed substrate composition, reef fish abundances as well as physical parameters collected under the programme. He also spoke about baseline maps and outcomes of international collaboration including the Allen Coral Atlas. These works include fisheries-related surveys such as catch composition, age and growth and catch effort. He also highlighted the severity and intensity of coral bleaching in Sri Lankan reefs with photographs.

F. Monitoring and the ecology of coral reefs in the Maldives, central Maldives

Dr Steve Newman, Group Director of Conservation, Director of Banyan Tree Marine Labs Maldives first presented on behalf of participants from the Maldives. This presentation was on monitoring efforts carried by Banyan Tree resorts in the central Maldives. Dr Newman primarily based his presentation on long term coral reef monitoring, coral reef recovery and other acute and chronic impacts. He also spoke about the 2016 mass bleaching event in the Maldives, which impacted on the natural coral recovery and rehabilitation from the 1998 mass bleaching event. April of 2016 was the warmest month of 2016 bleaching event according to his talk. His talk also included coral cover change due to 2016 coral bleaching event, reef benthos composition, fish biomass, recruit density and island use change of the surveyed areas.

3.2. DAY 2 (WEDNESDAY JANUARY 29TH 2020)

The 2nd day of the workshop started with a presentation by Dr Souter on producing the GCRMN Status of Coral Reefs of the World: 2020 report. Dr Souter focused this talk on how GCRMN plans to compose this report. In addition to discussing data collection and compiling challenges that is anticipated, he also informed the participants about report delivery timelines, the expected goals of the data collected, the tools to be used for analysing and processing data, the categorisation of data needed, the data sharing process and the protocols of sharing data. The presentation ended with a discussion about the questions raised by the participants.

COUNTRY REPORTING ON CORAL REEF MONITORING EFFORTS AND OTHER PRESENTATIONS

G. Long-term monitoring of Maldivian coral reefs

Mr Nizam Ibrahim from the MMRI presented on the trends of coral cover trajectory and status of the Maldivian coral reefs. In his presentation, he talked about the annual trends of the monitored sites, reef exposure, and coral cover as well as the Crown of thorns starfish outbreaks.

H. Coral cover across the Maldives over a decadal span

Mr Hussein Zahir from Small Island Research Center presented regarding coral cover change over a long-term period across the country. His talk included results of different bleaching events which severely impacted reefs of the Maldives and associated coral cover change. He also discussed the national coral reef monitoring initiative he pioneered following the 1998 coral bleaching event.

I. *A baseline study of the reef around R. Uthurumaafaru*

Mr Haroon Rasheed from Maldives Coral Reef Society presented the results of the Baseline study of the reefs around Raa Uthurumaafaru. He also highlighted challenges and improvements he will bring in the future to the monitoring program in the resort island.

J. *GCRMN East Asia Region: An example of a regional network, its structure and mechanism*

Mr Tadashi Kimura from GCRMN Pacific node spoke on the structure and governing instruments of the Pacific chapter. He presented on how the East Asia node of GCRMN coral reef monitoring came to existence to monitor the reefs of this sub-region expanded include areas from broader Pacific region, forming the Pacific node. He emphasised the importance of a bottom-up approach to establishing a robust monitoring program which is community-driven and initiated by local and national scientists and enthusiasts.

K. *Coral Reef status in South Asian Seas (SAS) Region and Restoring by strengthening South Asia Coral Reef Taskforce (SACRTF)*

Dr Sivaji Patra, Senior Program Officer of the South Asia Cooperative Environment Program (SACEP) presented regarding how SACEP can empower and can play a vital role in coral reef monitoring and research in the South Asia Sea Region and reviving the SACRTF. He started his talk with a brief history of SACEP, explaining the regional targets, followed by a discussion of the threats to coral reefs in the region, discussing the challenges, gaps, and constraints as well as the measures to take to strengthen the SACRTF. He also proposed streamlining the long-term regional coral reef monitoring data through SACEP.

L. Kuda Huraa Coral Propagation Post-2020: Recovery and Challenges

Mr Sam Burrel, on behalf of ReefScapers Maldives, presented on the Kuda Huraa coral propagation program post-2016: recovery and challenges. He included a brief introduction of their work and presented results of pre and post bleaching surveys. Mr Burrel also spoke regarding mitigation measures taken during bleaching event as well as the challenges they faced while collecting data.

M. Discussion on strengthening the coral reef monitoring in South Asian Seas (SAS) Region and increasing collaboration between the countries and researchers

Dr Souter and all the participants conducted an hour-long discussion regarding enhancing cooperation in the south Asian Seas region, as well as the final report to be prepared on the Status of Coral Reefs of the World: 2020 report. Dr Sivaji from SACEP proposed that all monitoring data should be streamlined through SACEP to the GCRMN. Given the strict timeline for reporting, Dr Souter stressed that establishing such a mechanism would be difficult to meet reporting deadlines. Many participants emphasised on establishing a mechanism to collaborate among them and the importance of reviving activities SACEP and the Coral Reef Taskforce, while some participants thought the Taskforce was idle, and only carrying out tasks assigned by SACEP. Participants also highlighted the importance of including coral reef scientists in the task force rather than consisting only of political appointees who do not carry scientific work. Due to time constraints, the discussions were ended by coordinators to find another opportunity to discuss and reach mutual agreement on how coral reef monitoring should be coordinated within the region. There was one suggestion for the Maldives to lead coral reef monitoring coordination effort within the region, as Maldives has the largest coral reef area among the region.

Before concluding the workshop sessions, Dr Souter emphasised the importance of submitting data by all participating organisations. Participants from all countries agreed that they would share data directly with the GCRMN and most already shared the data with the GCRMN.

RECEPTION BY HER EXCELLENCY MS ZAHA WAHEED

Minister Waheed hosted a dinner reception on the final day of the workshop. Senior officials of the government and staff of Ministry of Fisheries Marine Resources and Agriculture attended the dinner reception.

Annexe 1

List of participants

#	Country	Title	Name	Affiliation	Email
1	India	DR	RAGHUNATHAN CHELLADURAI	Director, Zoological Survey of India	raghuksc@rediffmail.com
2	India	MR	PATTERSON EDWARD JASPERKAMALAM	Suganthi Devadasan Marine Research Institute	edwardjkipatterson@sdmri.in
3	Japan	DR	TADASHI KIMURA	Chief Researcher, Japan Wildlife Research Centre	tkimura@jwrc.or.jp
4	Sri Lanka	MR	ARJAN RAJASURIA	Coordinator, Coastal and Marine Programme, IUCN Sri Lanka	arian.rajasuriya@gmail.com
5	Sri Lanka	MR	NISHAN PERERA	Blue Resources Trust	nishan@blueresources.org
6	Sri Lanka	DR	MOHAMED FAROOK MOHAMED FAIROZ	Dean / Faculty of Fisheries and Ocean Science, Ocean University of Sri Lanka, Crow Island, Colombo -15, Sri Lanka	fairoz.mfm@gmail.com
7	SACEP	DR	SIVAJI PATRA	Senior Programme Officer (Regional) - SASP	spor_sasp@sacep.org
8	ICRI	DR	DAVID SOUTER	GCRMN Cordinator	d.souter@aims.gov.au

9	Maldives	MR	Nizam Ibrahim	Senior Research Officer, Maldives Marine Research Institute, Ministry of Fisheries, Marine Resources and Agriculture	nizam.ibrahim@mmri.gov.mv
10	Maldives	MS	Aminath Angeela	Assistant Marine Biologist, Maldives Marine Research Institute, Ministry of Fisheries, Marine Resources and Agriculture	aminath.angeela@mmri.gov.mv
11	Maldives	MR	Hussein Zahir	Small Island Research Center, Maldives	hussein.zahir@lamer.com.mv
12	Maldives	MS	Najfa Razeer	IUCN Maldives	najfa.razeer@iucn.org
13	Maldives	MR	Hassan Ahmed	President, Reefcheck Maldives Coordinator, Biosphere expeditions Reefcheck, Scientific expeditions with University of Genova. Reefcheck and bioconstruction of reefs.	hassanbeybe@gmail.com ; savethebeach.villingili@gmail.com

14	Maldives	DR	Dr. Steve Newman	Group Director of Conservation Director of Banyan Tree Marine Labs Maldives	steven.newman@Banyantree.com
15	Maldives	MS	Enas Mohamed	Environmental Analyst, Environmental Protection Agency	enas.mohamed@epa.gov.mv
16	Maldives	MR	Ahmed Aslam Waheed	Faculty of Engineering science and technology. Lecturer - Department of Environment and Natural Sciences	ahmed.aslam@mnu.edu.mv
17	Maldives	MR	Haroon Rasheed	Maldives Coral Reef Society, Field Biologist at You and Me resort	crs.maldives@gmail.com , haaronrasheed8@gmail.com
18	Maldives	MS	Muhusina Abdhulrahman	Ministry of Environment and Energy	muhsina.abdulrahman@environment.gov.mv
19	Maldives	MR	Mahid Abdhulrahman	Ministry of Environment and Energy	mahid.abdulrahman@environment.gov.mv
20	Maldives	MR	Sam Burrell	Reef Scapers PVT Ltd	mariesaleem@gmail.com / thomas@seamarc.com

Annexe 2

**Global Coral Reef Monitoring Network (GCRMN), South Asian Seas Regional Workshop
hosted by**

**Maldives Marine Research Institute, Ministry of Fisheries Marine Resources and Agriculture
on behalf of the Maldivian government**

Malè, Republic of the Maldives

28-29th January 2020

AGENDA (January 27th, 2020)

**Tuesday, January 28th, 2020 (Maldives Customs Building Conference Room (8th Floor), Dress code:
Semi-formal)**

08.30 - 09.00	Registration of International Participants
09.00 - 09.10	Official welcome by Ms. Shafiya Naeem, head of MMRI
09.10 - 09.25	Welcoming remarks by H.E Zaha Waheed, Minister of FMRA
09.25 - 10.00	<u>Morning Tea (Photo session with the Minister H.E Zaha Waheed)</u>
10.00 - 10.30	Aims and Objectives of the workshop by Dr Souter, GCRMN coordinator
10.30 - 11.30	Presentation of ICRI, the GCRMN and the GCRMN Implementation and Governance Plan by Dr Souter, GCRMN coordinator
11.30- 13.00	<u>Lunch and Prayer Break</u>
13.00- 14.00	Country Presentations – India

14.00 – 15.00	Country Presentations- Sri Lanka
15.00- 15.30	Presentations by Dr. Steve Newman, Group Director of Conservation Banyantree on “Resilience and recovery trajectories of coral reefs in the Maldives” based on long term coral reef monitoring in the central Maldives
15.30- 16.00	<u>Evening Tea</u>

Tuesday, January 28th, 2020 (Maagiri Hotel, 2nd Floor, Dress code: **Smart Casual**)

20.00- 22.00	Reception Dinner Hosted by H.E Zaha Waheedh, Minister of Fisheries, Marine Resources and Agriculture
--------------	--

Wednesday, January 29th, 2020 (Maldives Customs Building Conference Room (8th Floor), Dress code: **Smart casual**)

09.00- 09.45	Producing the GCRMN Status of Coral Reefs of the World: 2020 report by Dr Souter, GCRMN Coordinator
09.45- 10.15	<u>Morning Tea</u>
10.15- 10.45	Country presentation by Nizam Ibrahim on “Trends of coral cover trajectory and status of Maldives coral reefs based on long term coral reef monitoring”
10.45 -11.15	Presentation by Hussain Zahir, Small Island Research Group, the Maldives on “Coral cover across the Maldives over decadal span”

11.15 - 11.45	Presentations by Haroon Rasheed, Maldives Coral Reef Society on “Baseline study of the reefs around Raa Uthurumaafaru”
11.45 - 13.00	<u>Lunch Break and Prayer break</u>
13.00 - 13.30	GCRMN Example region Presentation, Tadashi Kimura from East Asia node
13.30 - 14.00	Strengthening Coral Reef Taskforce (SACRTF) by SACEP by Dr. Sivaji
14.00 - 14.30	Strengthening collaboration in the region- DISCUSSION
14.30- 15.00	Way forward for the report by Dr Souter, GCRMN Coordinator
15.00- 15.30	Concluding remarks and thanks
15.30- 16.00	<u>Evening Tea</u> and farewell to international Participants- END OF WORKSHOP