

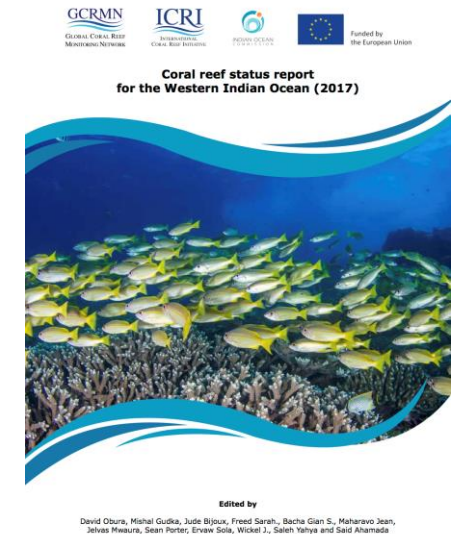
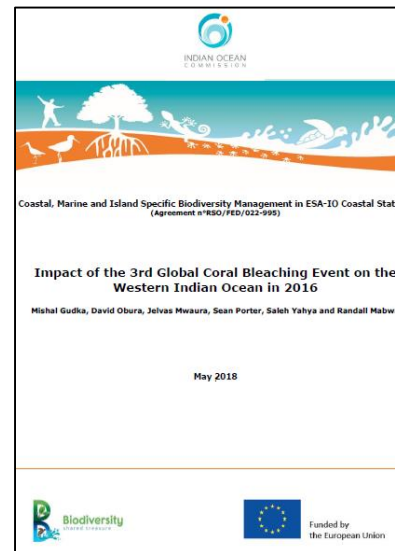
Reporting and Supporting Coral Reef Sustainability In The Western Indian Ocean

Nairobi Convention
Science-Policy
workshop

8 July 2018
Durban, South Africa

David Obura, Mishal
Gudka

On the contributions of the Coral Reef Task Force/Coral Reef Networks and the Global Coral Reef Monitoring Network (GCRMN) in the WIO



Post-bleaching (2016)

1 REGIONAL CHAPTERS

- 1.1 Introductory sections
- 1.2 Methodology
- 1.3 Regional results
- 1.4 Discussion
- 1.5 Recommendations

2 NATIONAL CHAPTERS

- 2.1 Comoros
- 2.2 Kenya
- 2.3 Madagascar
- 2.4 Mauritius
- 2.5 Seychelles
- 2.6 South Africa
- 2.7 Tanzania



INDIAN OCEAN
COMMISSION



Contributors

Data contributors:

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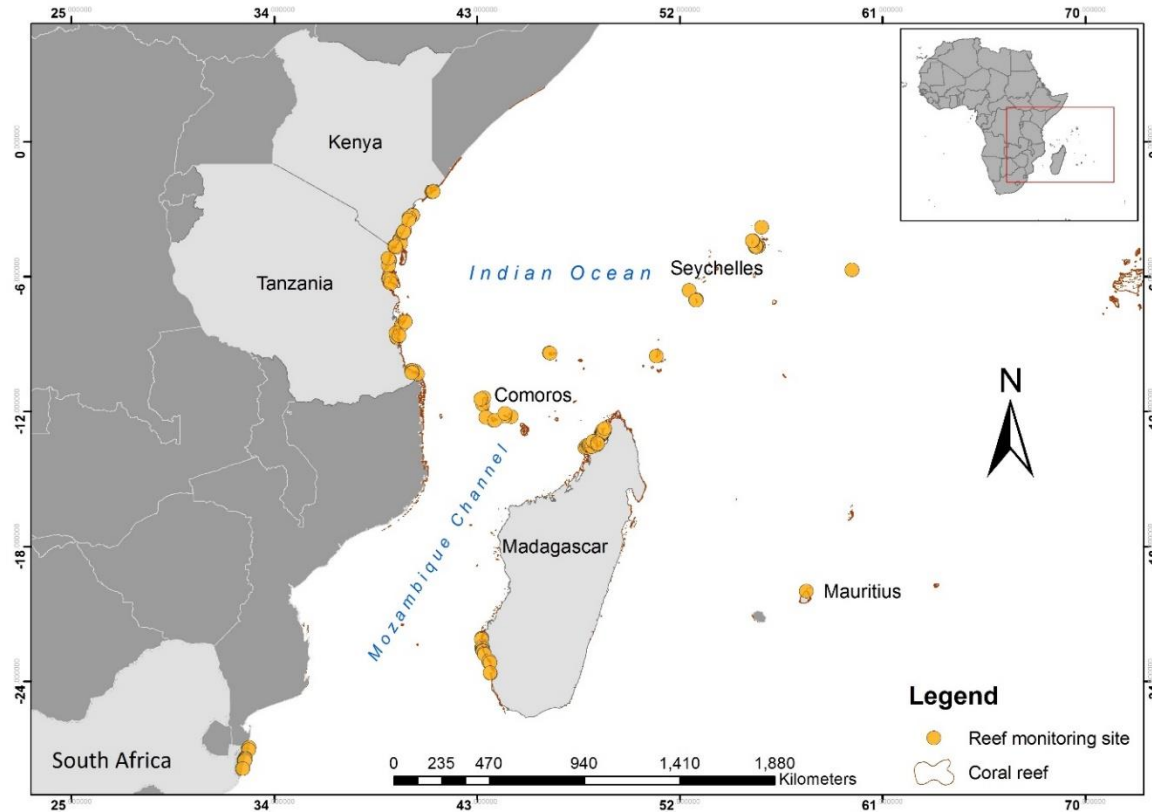
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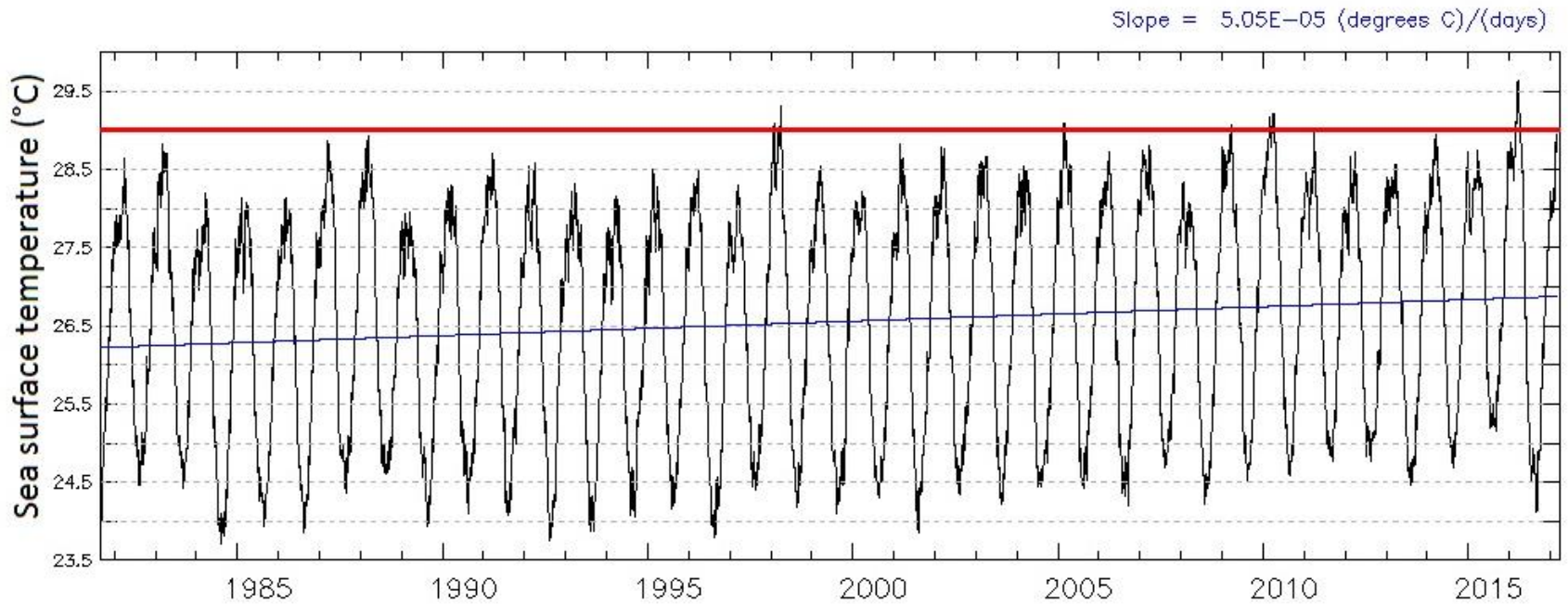
Effort



- June 2017 – March 2018
- Training webinar July 2017 (Reef Resilience platform)
- National and regional experts and CRTFs
- Sept/Oct 2017 – post-bleaching surveys in 4 countries
- Regional call for data
- Data from 1992-2017 (26 years)
- Special session at the 10th WIOMSA Scientific Symposium, 2 November 2017
- Data sharing agreement
- Data analysis; report drafting alongside national coordinators
- Finalization of the regional report

	Coral	Fleshy Algae
Countries	6	5
Sites	153	131
Site surveys	862	729

Sea surface temperature in 2016



Jan

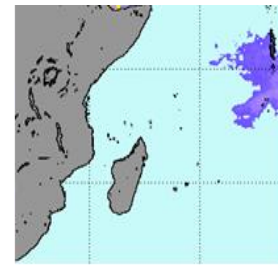
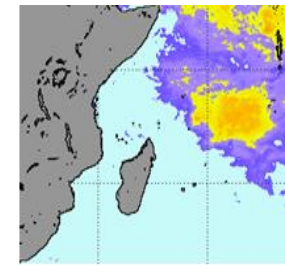
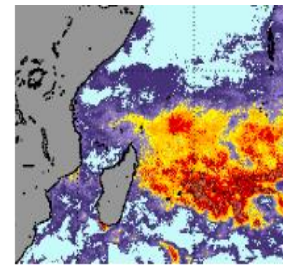
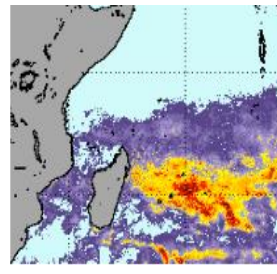
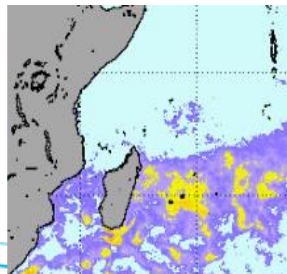
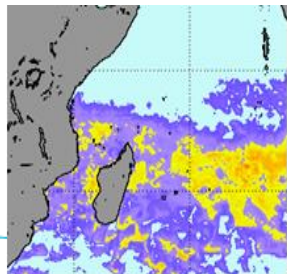
Feb

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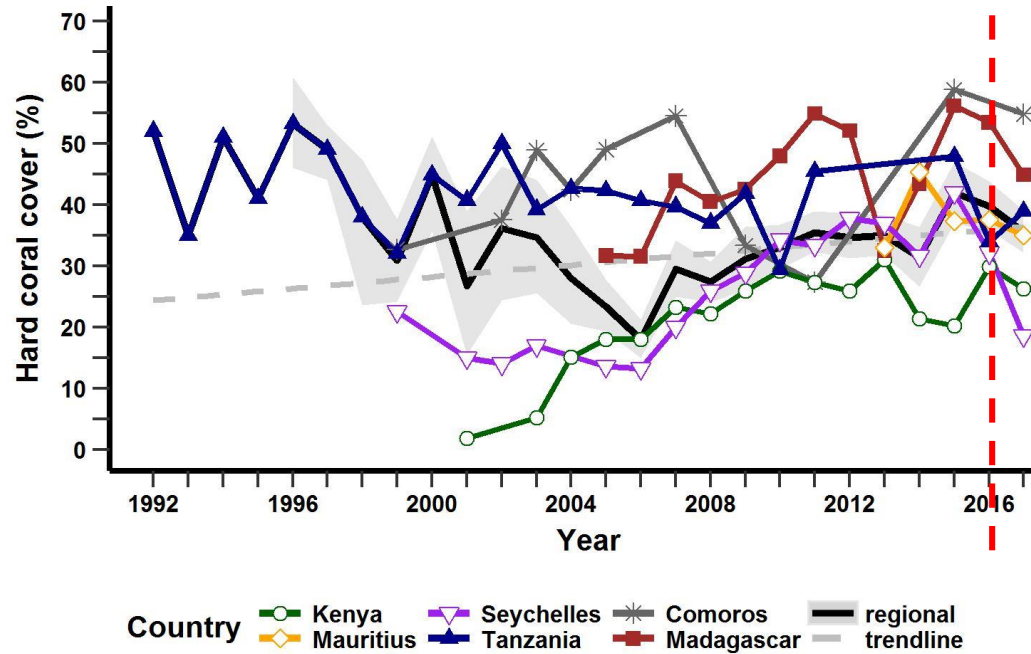
May

Jun

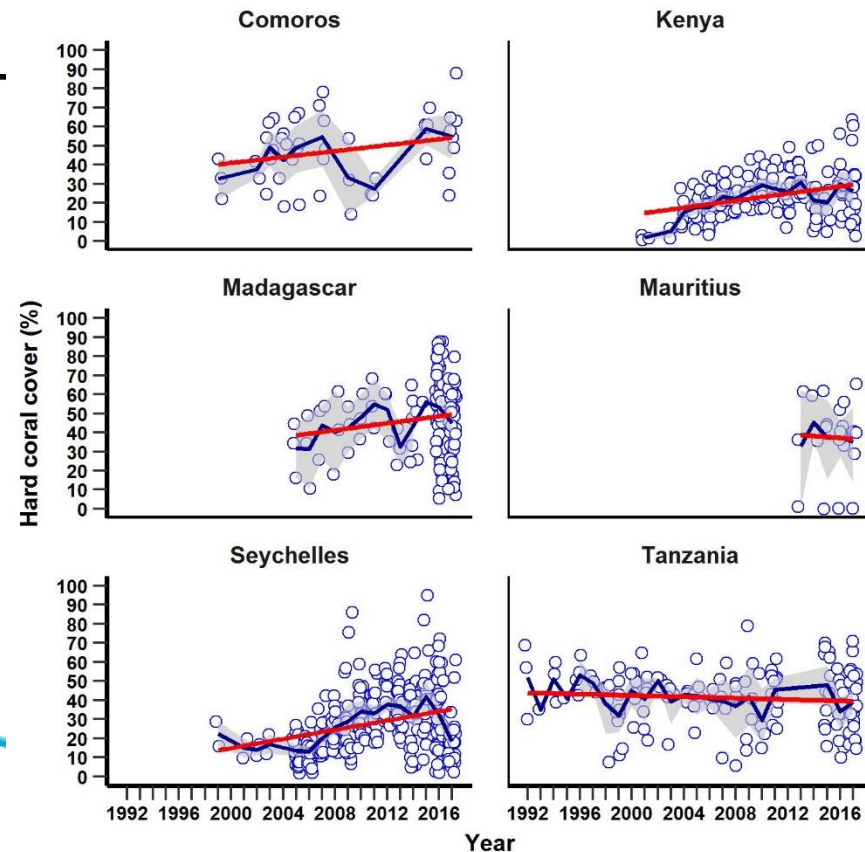


Hotspot

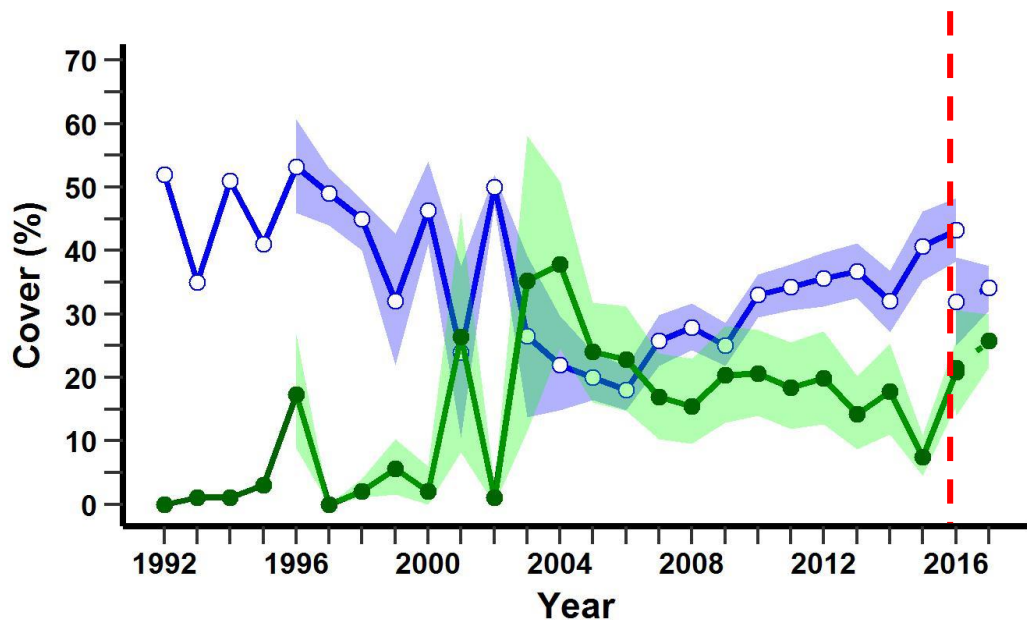
Coral cover



Country	# sites
Comoros	9
Kenya	30
Madagascar	41
Mauritius	5
Seychelles	50
Tanzania	25
TOTAL	160

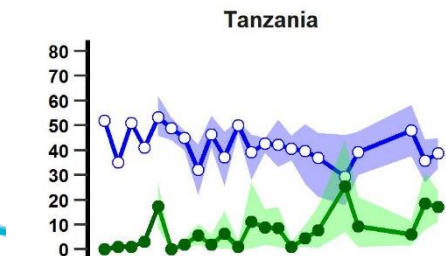
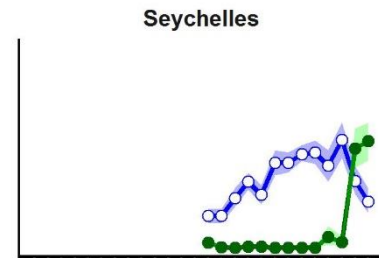
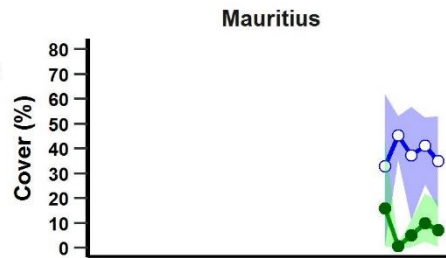
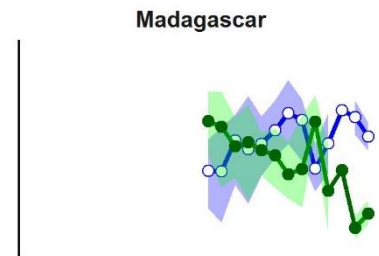
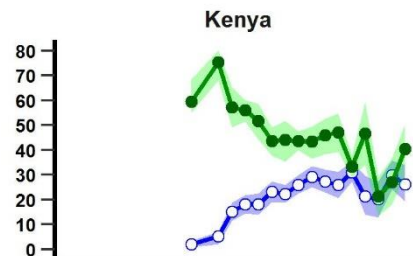


Coral and algal cover



Period — Pre — Post Cover type — Hard Coral — Fleshy Algae

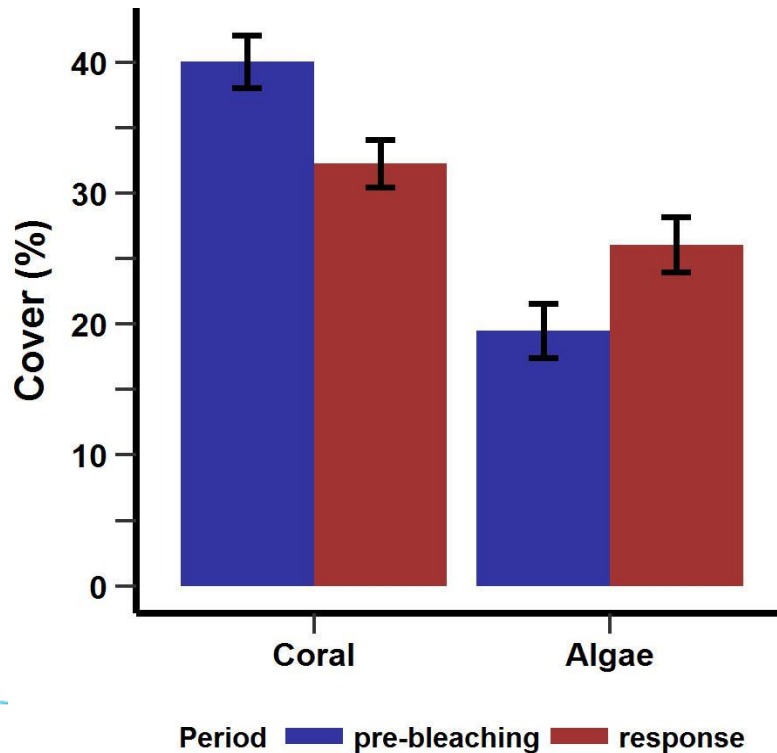
Country	# sites
Kenya	30
Madagascar	40
Mauritius	5
Seychelles	32
Tanzania	24
TOTAL	131



Key finding - benthos

From pre-2016 to post-2016 (n=114 sites, 5 countries)

- coral cover decrease: 20% (≈ 40 to 32%)
- algae cover increase: 34% (≈ 19 to 26%)



Compared to 1998:

- Coral cover decrease: 25% (40% to 30%)
- Algal cover increase: 2.5 times (15% to 35%)

Summary – national results

Country	# sites			% change (post % cover)		Observations/interpretation
	total	data for both periods		coral	algae	
		coral	algae			
Comoros	9	5	0	5% (62%)	-	<ul style="list-style-type: none"> Low impact of bleaching: post-bleaching (2017) coral cover high (55%), fleshy algae low
Kenya	30	21	21	0% (24%)	9% (36%)	<ul style="list-style-type: none"> Lamu (north) most affected region with 51% loss in coral cover at 2 sites Fleshy algae cover higher than coral cover post-bleaching
Madagascar	41	41	40	-13% (46%)	56% (14%)	<ul style="list-style-type: none"> Only data from west coast, most severe impacts in northwest. Relatively high coral cover and low fleshy algae post-bleaching
Mauritius	5	5	5	~ 0% (35%)	~ 0% (7%)	<ul style="list-style-type: none"> Single site reported, from Anse La Raie Lagoon.
Seychelles	50	43	32	-50% (17%)	~45% (42%)	<ul style="list-style-type: none"> Inner Islands more severely impacted than Outer Islands (60% loss vs. 17%, respectively) Maximum mortality of 80% at North Island. 4 sites with no impact or positive gain in the Inner Islands (NW Mahe and Cerf Island)
South Africa	5	5	0	~0% (20%)	<5% (21%)	<ul style="list-style-type: none"> Negligible bleaching and no mortality
Tanzania	25	16	16	-10% (39%)	25% (15%)	<ul style="list-style-type: none"> Lower mortality compared to bleaching indicates substantial recovery and survival of corals. Highest impacts on west coast of Unguja Island

Findings (management/policy-relevant)

- **Two step-declines in coral cover** – in 1998 (25%) and 2016 (20%) represent very significant declines in coral reef health.
- **Complementary increases in algal cover** may represent a shift from coral to algal-dominated reefs, with significant implications on future resilience, recovery and productivity/ecosystem services.
- Although bleaching was widespread, the subsequent coral **mortality was not as extensive as the bleaching**

Recommendations

Relevant NAIROBI CONVENTION COP Decisions:

Decision CP3/2: Protection of coral reefs and associated ecosystems

- joining ICRI, national coral reef action plans or strategies
- Establish Coral Reef Task Force
- Collaborate with regional bodies - Indian Ocean Commission

Decision CP8/1: Work Programme for the Nairobi Convention, 2018-2022

- Sustainable Development Goals - marine and coastal environment.

Decision CP8/5: Agenda 2063 and the Africa Integrated Maritime Strategy 2050

Decision CP8/10: Blue and Ocean Economy

New Decision/topics

Founded on the role of coral reefs in the Sustainable Development and Blue Economy agendas

1. Stronger and sustained support to coral reef monitoring in national and institutional systems, and using that information in decision-support processes.
2. Revitalization and strengthening of the Coral Reef Task Force, and increasing its scope to e.g. ocean acidification.