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OF MARINE SCIENCE

# ICRI *Ad Hoc* Committee on Reef Restoration and Adaptation

Dr Ian McLeod



**Chairs:** Ian McLeod, David Souter

Ahmed Mohamed (UNEP)

Alicia McArdle (Mars)

Amanda Brigdale (Blue Charter)

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Cedric Robillot (GBRF)

Chloe Harvey (Reef-World)

Coco Tamlyn (Coral Guardian)

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David Wachenfeld (Australia)

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Firdaus Agung (Indonesia)

Francis Staub (ICRI Secretariat)

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Hazel Thornton (UNEP-WCMC)

Jennifer Koss (USA/NOAA)

Margaux Hein (UNEP)

Mohd Kushari (CTICFF)

Peter Davies (SPREP)

Sylvain Pioch (France)

Tadashi Kimura (Japan)

Tali Vardi, Tom Moore (CRC)

Thomas Dallison (ICRI)

Vivian Ramnarace (Belize)

# ICRI Ad Hoc Committee



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2019

## Ad hoc committee on reef restoration



- 30 active members - seven ICRI nations and 14 organisations
- Supported by Australia, UNEP, AIMS
- Online meetings every 2<sup>nd</sup> month - two time zones
- Connect and share information
- Review and publish reports and journal articles
- Facilitate capacity building

Gary Cranitch, Queensland Museum



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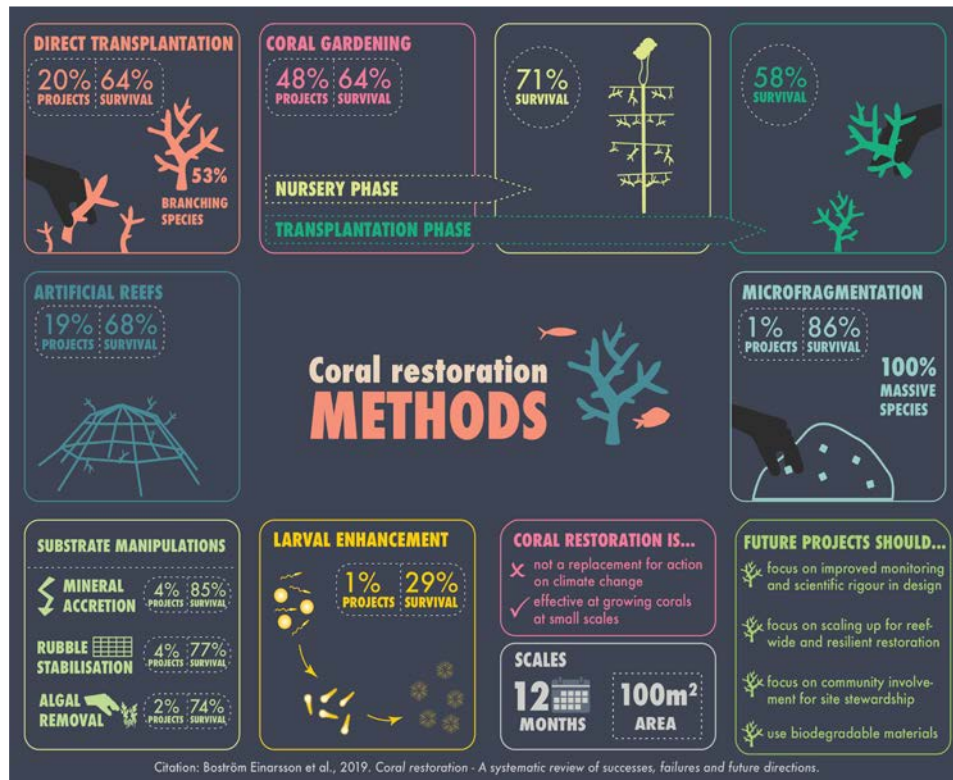
2019

# Global mapping of restoration priorities



## Mapping Current and Future Priorities for Coral Restoration and Adaptation Programs

International Coral Reef Initiative (ICRI) Ad Hoc Committee  
on Reef Restoration 2019 Interim Report



Citation: Boström Einarsson et al., 2019. Coral restoration - A systematic review of successes, failures and future directions.



Initiative Internationale pour les Récifs Coralliens  
International Coral Reef Initiative

[www.icriforum.org](http://www.icriforum.org)

**Resolution to update the 2005 ICRI resolution on artificial coral reef restoration and rehabilitation**

*adopted on December 2019, at the 34<sup>th</sup> ICRI General Meeting (Australia)*

**Acknowledging** that coral reefs have a vital role providing food security, livelihoods and coastal protection for millions of people in the tropics and that they are now one of the most threatened ecosystems on the planet as a result of both climate change and local anthropogenic pressures;

**Noting** the Intergovernmental Panel on Climate Change Special Report on Oceans and Cryosphere in a Changing Climate which was accepted by the IPCC in September 2019

**Recalling** the 2001 ICRI Decision on Reef Restoration, which called for the urgent development and publication of a handbook (or guidelines) on reef restoration and enhancement techniques;

**Recalling** also the 2005 ICRI Resolution on Artificial Coral Reef Restoration and Rehabilitation, which acknowledged that there is often an urgent need to restore and rehabilitate coral reefs and associated ecosystems following major damage, but raised concerns about the lack of adequate scientific evidence about the ecological and economic effectiveness of artificial rehabilitation and restoration;

**Aware** of the 2019 United Nations Environment Assembly Resolution 4/13 on “Sustainable coral reefs management”, which requests the Executive Director of the United Nations Environment Programme in collaboration with ICRI to assist with the compilation of best practices manual for coral restoration, for maintenance of ecosystem services, including coastal defense and/or restoration of fish nursery areas;

**Noting** that 2021-2030 is the UN Decade of Ecosystem Restoration;



AIMS



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# CORAL REEF RESTORATION

AS A STRATEGY TO IMPROVE ECOSYSTEM SERVICES

A guide to coral restoration methods



## 2020 UNEP and ICRI Report



United Nations  
Environment Assembly of the  
United Nations Environment  
Programme

United Nations Environment Assembly of the  
United Nations Environment Programme  
Fourth session  
Nairobi, 11–15 March 2019

Resolution adopted by the United Nations Environment  
Assembly on 15 March 2019

Distr.: General  
28 March 2019  
Original: English



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### Advisory Committee

Austin Bowden-Kerby (*Corals for Conservation*), Emily Corcoran (*Independent consultant*), Alasdair Edwards (*Newcastle University*), Jessica Levy (*Coral Restoration Foundation*), Jennifer Loder (*Great Barrier Reef Foundation*), Joanie Kleypas (*National Centre for Atmospheric Research-USA*), Jennifer Koss (*NOAA*), Elizabeth McLeod (*The Nature conservancy*), Phanor Montoya-Maya (*Corales de Paz*), Buki Rinkevich (*National Institute of Oceanography-Israel*), Francis Staub (*ICRI*), David Suggett (*University of Technology Sydney*), Didier Zoccola (*Centre Scientifique Monaco*).





- Coordinate international collaboration
- Advocate for the use of best practice restoration techniques
- Facilitate the transfer of new knowledge of restoration techniques to managers and practitioners







2<sup>nd</sup> JUNE 2021

13:00 - 15:10 UTC



**#GenerationRestoration**

# RESTORING CORAL REEFS

## *Guidelines, Best Practices & Success Stories*



Photography by ALEXIS ROSENFELD



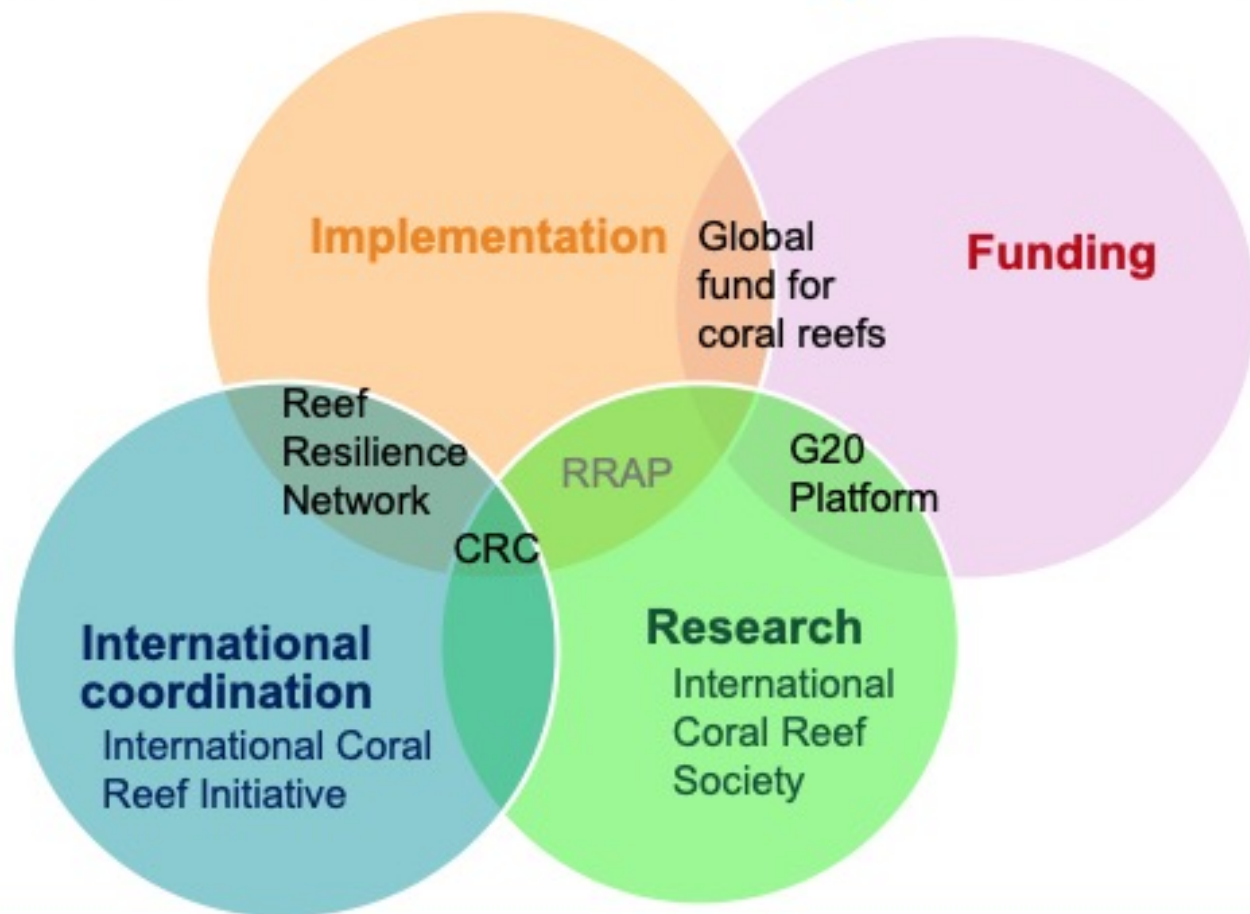


- Workshop with RBM committee - 'Integrated resilience and climate change adaptation into coral reef restoration'
- Supported the committee on developing a recommendation for a post-2020 coral reef target
- Capacity building workshop – mentored course
- Coral reef funding report
- Coral restoration implementation guidelines
- Available as an *ad hoc* advisory group

# Global coral restoration operations

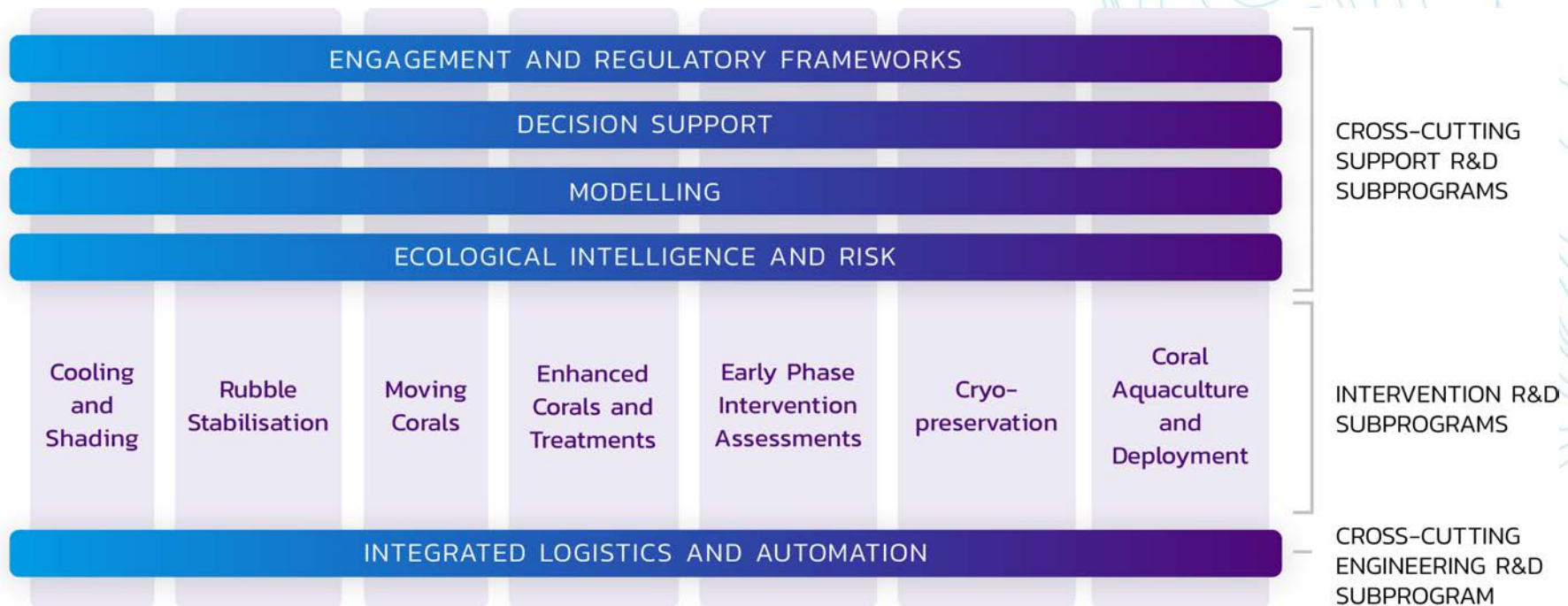


**NOAA**  
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# Reef Restoration and Adaptation Program



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# Mission: *Iconic Reefs*

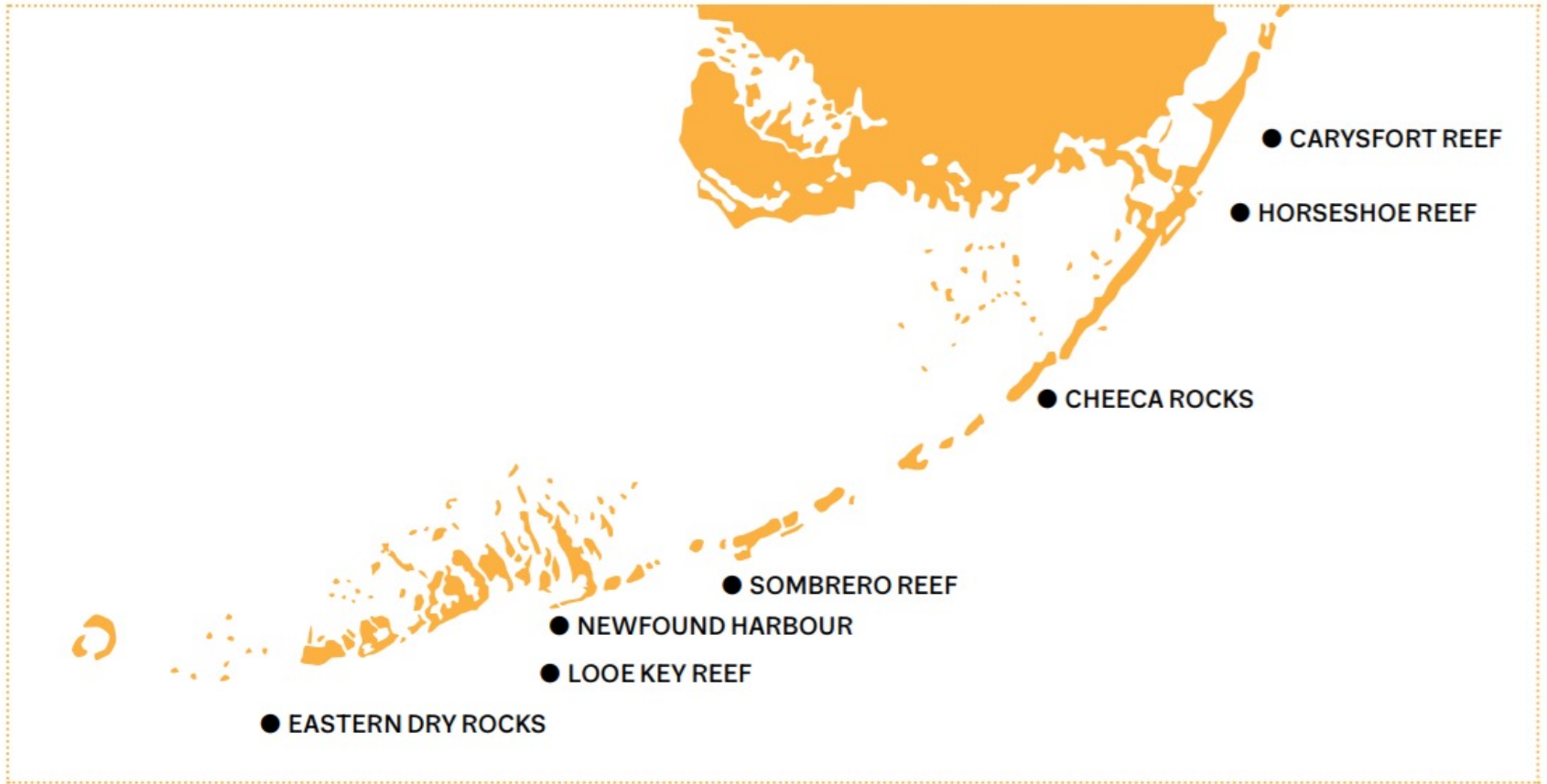
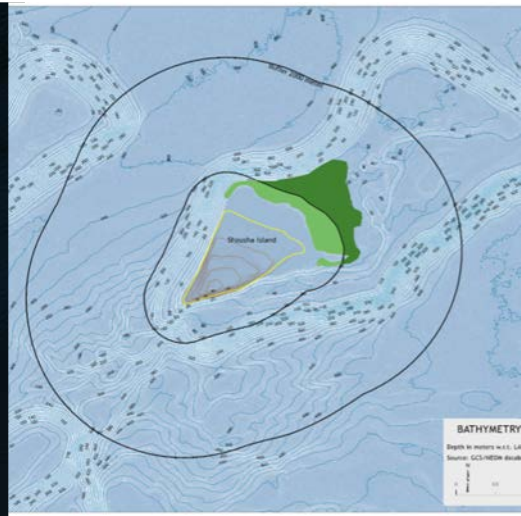


Figure 7. Map of the 7 iconic reefs chosen along the Florida Keys for the *Mission: Iconic Reefs* project.





## Towards A Global Showcase Coral Gardens at NEOM's Shousha Island





### Theme 1.C Promote and build capacity for the restoration of resilient coral reefs

- Stress hardening
- Translocation of coral stocks or species
- Manipulation of symbiotic relationships
- Managed selection
- Genetic modification
- Engineering the local environment







- Provide a coordinating mechanism for international collaboration
- Advocate for the use of best practice restoration techniques
- Facilitate the transfer of new knowledge of restoration techniques
- Maintain the Restoration Hub
- ICRI Network on coral restoration and adaptation?
- Support the UN Decade of Ocean Science and the UN Decade on Ecosystem Restoration





If resources allow:

- Update the Manager's Guide to Coral Reef Restoration Planning and Design, provide mentored training and train facilitators
- Continue to work on recommendations in 'A Decision Framework for Interventions to Increase the Persistence and Resilience of Coral Reefs'
- Support efforts to improve coral reef restoration monitoring



Martin Colognoli, Coral Guardian





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AIMS: Australia's tropical marine research agency.

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**THANK YOU**