



ICRI Member's Report

SOUTH AFRICA

Reporting period December 2017 – November 2018

1. **Reporting on the ICRI Plan of Action 2016-2018.** *Your responses will help inform the Secretariat about members' contributions toward the previous Plan of Action.*

- a. **Please list any relevant examples from your organisation/country of investment/projects to protect and restore the natural infrastructure of reefs and mangroves.** (See Goal (1) 2 [ICRI Recommendation for supporting investments in the natural infrastructure of reefs and mangroves to increase climate resilience](#)).

The South African coral reefs are all protected within a World Heritage Site, the iSimangaliso Wetland Park, and are thus subject to negligible anthropogenic damage. Being at high latitude, they have also only experienced nominal ENSO bleaching. We have nevertheless not been complacent and reef monitoring and resilience have received attention in past research (previously reported) and are currently the focus of further investigation (see recent publications).

- b. **Has your organisation/country made any progress in the following areas to target anthropogenic pressures?** Please give detail below. Note: If no change since your last ICRI member report, please write 'no change'.

- Encourage ban of plastic microbeads in cosmetic products.** (See Goal (3) 2 & [See ICRI Recommendation to reduce plastic microbeads pollution in marine environment](#)):

No change

- Improve regulation and enforcement to reduce direct anthropogenic damage due to dredging and physical alteration of reef structures.** (See Goal (3) 3 & [ICRI Recommendation to reduce damage due to dredging and dumping on coral reefs](#)):

Not applicable

- Deployment of mooring devices limiting the mechanical destruction of coral reefs and seagrasses.** (See Goal (3) 4).

Not applicable

- c. **Did your organisation/country celebrate International Year of the Reef?** Please give details below. (See Goal (5) 1 & [ICRI Recommendation designating 2018 as the third International Year of the Reef](#)):

This was included in Sea World Education material in the uShaka Marine Park, Durban.

2. **Contribution to the ICRI Plan of Action 2018-2020 and upcoming ICRI general meetings.** *Your responses to the following questions will assist the Secretariat in assessing contributions towards the major themes of the draft ICRI Plan of Action 2018-2020.*

Theme 1 – Promote effective and adaptable solutions to improve the protection of coral reefs

- a. **Which of the below topics do you consider to be the three top challenges that your organisation faces in managing coral reefs?** Please select from the options below:

- Climate change impacts
- Inadequate planning, zoning and management
- Unsustainable resource extraction
- Tourism and recreation
- Shipping
- Coastal development
- Dredging
- Illegal and destructive fishing
- Fish and coral trade
- Marine debris
- Other. Please specify:

- b. **Please list any examples of innovative management practices that your organisation/country is involved in, such as use of VMS, drones & ecological mooring devices.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

Surface drifter buoys and ADCPs have been deployed in the iSimangaliso Wetland Park to elucidate the current systems and reef connectivity. The results will be of management use if the unfortunate event of a ship grounding or oil spill occurs.

- c. **Please list any examples of innovative funding for management that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

Management and research funding remain an issue in the weak South African economy.

- d. **Please list any examples of leading practices, techniques and strategies for building reef resilience that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

While current metagenomic research is focusing on coral resilience, mesocosm studies on the responses of coral communities to climate change have also been initiated.

- e. **Please list any examples of leading practice reef restoration mechanisms that your organisation/country is involved in.** Include their limits, conditions of implementation, financing and an assessment of their results and links for more information if possible.

Not applicable at this stage.

Theme 3 – Support communities reliant on coral reefs

- f. **Is sustainable tourism development a significant challenge for your organisation?** If so please include detail below of the kinds of challenges faced and your strategies to deal with them.

Preliminary socio-economic studies on the benefits and implications of tourism have been completed (previously reported) and are presently being expanded in a PhD study.

iSimangaliso Wetland Park is one of the few World Heritage Sites which has resident local communities. Development of tourism and the expected job creation and poverty alleviation continue to constitute an environmental challenge.

- g. **Is your organisation involved in activities to raise awareness and encourage action to support communities reliant on coral reefs?** Please include details below.

This is ongoing, both by Ezemvelo KwaZulu-Natal Wildlife in the iSimangaliso Wetland Park and at the Sea World Education facilities at uShaka Marine park in Durban.

Theme 4 – Help to reduce anthropogenic threats to coral reefs, particularly those that occur at a global or regional scale

- h. **What activities is your organisation involved in to elevate awareness of the global nature of the threat of climate change to coral reefs?** Please include details below

This is included in Sea World Education material at the uShaka Marine Park, Durban.

- i. **Has your organisation made any progress in dealing with destructive fishing and trade?** Please include details below.

Not applicable

- j. **Has your organisation made any progress in dealing with marine debris?**
Please include details below.

This is not a problem on the coral reefs but is a growing problem on the beaches. Beach clean-ups are organised, when needed. Ghost nets and drifting illegal Fish Aggregating Devices (FADs) are on the increase.

3. **Would you like to report on your activities during the ICRI GM?** Please give details below.

No

4. **International events.** Please list any upcoming international events relevant to ICRI which someone from your organisation plans to attend in 2018-2019.

- ICRI GM, Monaco, 5-7 Dec 2018
- Conference of the Parties to the United Nations Framework Convention on Climate Change, 3-14 Dec 2018
- Reef Futures 2018: A Coral Restoration and Intervention-Science Symposium, Florida, 10-14 Dec 2018
- Global World Heritage Marine Managers meeting, Alaska, US, 26-31 May 2019

Other:

5. **Publications.** Please list relevant publications and reports you have released during this reporting period.

PORTER SN, SCHLEYER MH. 2017. Long-term dynamics of a high-latitude coral reef community at Sodwana Bay, South Africa. *Coral Reefs* 36: 369-382.

STAINBANK SV, SCHLEYER MH. 2018. Hand-held sediment corer for use in shallow, turbulent coastal environments. *Western Indian Ocean Journal of Marine Science* 17: 99-102.

SCHLEYER MH, FLOROS C, LAING SCS, MACDONALD AHH, MONTOYA-MAYA PH, MORRISA T, PORTER SN, SERÉ MG. 2018. What can South African reefs tell us about the future of high-latitude coral systems? *Marine Pollution Bulletin* 136: 491-507.

PORTER SN, HUMPHRIES MS, BUAH-KWOFIE A, SCHLEYER MH. 2018. Accumulation of organochlorine pesticides in reef organisms from marginal coral reefs in South Africa and links with coastal groundwater. *Marine Pollution Bulletin* 137: 295-305.

SCHLEYER MH, PORTER SN. 2018. Drivers of soft and stony coral community distribution on the high-latitude coral reefs of South Africa. *Advances in Marine Biology* 80: 1-55.
<https://doi.org/10.1016/bs.amb.2018.09.001>

BENAYAHU Y, BRIDGE T, COLIN P, LIBERMAN R, MCFADDEN C, PIZARRO O, SCHLEYER MH, SHOHAM E, REIJNEN B, WEIS M, TANAKA J (in press) Octocorals of the Indo-Pacific. In: Loya Y, Puglise K, Bridge T (eds) *Mesophotic coral ecosystems of the World*. Springer, New York.

6. ICRI Member Feedback. What do you find most valuable about the ICRI member reports? If you have any ideas for improvement please list below:

7. General Information. (Note that this information will be posted on the ICRI website on your member page: <http://www.icriforum.org/about-icri/members-networks>.)

Member type (Country / Organisation):	
Focal Point 1:	
Name:	Professor MH Schleyer
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Thank you very much for sharing your valuable experiences and information with ICRI.