

## **Call to Action - A commitment to improving outcomes for the world's coral reefs**

Coral reefs are some of the most diverse and valuable ecosystems on Earth.

Supporting around 4,000 species of fish, 800 species of hard corals and hundreds of other species. Numerous research projects are being undertaken from coral reef animals and plants as possible cures for cancer, arthritis and other diseases. The reefs provide us with coastal protection and goods and services worth \$375 billion each year including the tourism industry. Not to mention they are responsible for regularly servicing our lungs providing up to 85% of the Earth's oxygen.

Coral reefs are facing unprecedented threats from a combination of climate change and local pressures such as bleaching events, fisheries and pollution management causing us to lose more than 50% of the world's coral reefs in the past 30 years. This trajectory is likely to continue without active interventions. However there is a growing movement of scientists, managers and practitioners who believe that active reef restoration combined with strong global action to mitigate the effects of climate change can deliver substantial socio-economic and ecological benefits to coral reefs and associated communities worldwide.

37 reef managers, restoration practitioners, consultants, university and NGO representatives along with local community members attended a hands-on reef restoration workshop with expert Dr. David Vaughan in Florida December 2018. Held at and coordinated by Mote Marine Lab in partnership and following Reef Futures Symposium 2018 (a conference to promote collaboration between specialists within the field) the workshop aimed to share innovative restoration methodologies, such as micro-fragmentation, to build capacity amongst practitioners from around the world.

Chloe Shute, technical coordinator at Nature Seychelles said, "what we have learnt at Mote Marine Lab will help us diversify our restoration activities to enhance reef resilience and improve our outplant program utilising micro-fragmentation".

"The world is clearly at a crossroads with climate change and local stressors severely compromising the ability of coral reefs to persist given the current environmental conditions" Dr Vaughan said. "I am confident that we have the methods and techniques to significantly improve the health and resilience of reefs worldwide and I feel privileged to share my knowledge with this exciting group of enthusiastic reef restoration advocates".

During the workshop, participants were exposed to innovative aquaculture techniques to significantly scale-up the capacity to deliver large quantities of climate-hardened corals to reefs worldwide. Involving an exciting schedule of presentations and immersive hands-on learning on reef restoration methods at a world class facility, the workshop provided a unique opportunity for participants to enhance their knowledge of reef restoration and understand the role it may be able to play in helping to build the resilience of the Reef at local scales.

“Dr Vaughan delivered the concepts of scaling-up reef restoration in such a clear and easy to understand manner to enable implementation across multiple locations at sufficient scale to have ecologically profound outcomes” said Nathan Cook, marine scientist of Reef Ecologic.

Addressing global and local stressors is important. Restoration buys us time, however we simultaneously need to address global impacts, such as climate change and ocean acidification, as well as local impacts, such as overfishing and pollution. The scientific community cannot do this alone, we need to combine efforts involving government, the private sector and the public.

By improving collaboration we can increase the scale of high quality restoration at multiple locations. Accepting the risk of action -- as opposed to the tragedy facing humanity as a result of inaction -- will reduce many of the barriers that currently restrict the implementation of reef restoration.

Workshop participants have collectively committed to the following actions:

1. Work closely with regulatory bodies and management agencies to take bold action to support the rapid implementation and scaling up of reef restoration activities.
2. Improve collaboration between all reef restoration practitioners to share knowledge and improve outcomes.
3. Improve opportunities for more people to get involved in restoration activities.
4. Improve communications and messaging with all stakeholders from our reef restoration work.

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