

## **AIMS Opening Statement to Senate Estimates – June 2018 FINAL**

My name is Paul Hardisty, and I am CEO of the Australian Institute of Marine Science.

Thank you for the opportunity to be here today.

The Australian Institute of Marine Science was set up by an Act of Parliament in 1972, headquartered in Townsville, North Queensland. With laboratories in Perth and Darwin, our mission is to provide the research and knowledge of Australia's tropical marine estate required to support growth in its sustainable use, effective environmental management, and protection of its unique ecosystems.

The GBR and other Australian coral reefs have been, and continue to be, a key focus of our research. Since 1985, AIMS has been monitoring the health of the GBR. Our uninterrupted thirty-three year record is the definitive source of information on the state of reef. In the west, our 25 year uninterrupted monitoring of Scott Reef provides another perspective on the issues facing reefs globally, and is a great example of co-operation with industry. The provision of high-quality, objective, peer-reviewed science is at the core of what we do. Our research infrastructure includes two modern purpose-built coastal research vessels (one on each coast), and the National Sea Simulator, the world's most sophisticated research aquarium complex, in Townsville. Our researchers are some of the best in the world. AIMS is currently ranked number two in the world in marine science, based on the citation impact of our peer-reviewed science in the field of marine and fresh water biology.

The results of our most recent monitoring surveys (now available on the AIMS website) indicate that the Great Barrier Reef continues to experience severe stress, and all regions of the GBR now show declining coral cover. The reef is huge, however, and the degree of coral loss differs along its length. The northern region was severely affected by cyclones and the back-to-back coral bleaching in 2016 and 2017. The central region was badly hit by coral bleaching, especially during 2017, and the current crown-of-thorns starfish outbreak that slowly makes its way south. Reefs in the southern GBR had been on a recovery trajectory for the past 7 years, but many have now suffered coral loss due to the impact of tropical cyclone Debbie and a new, intense crown-of-thorns starfish outbreak.

Five years ago, AIMS began working on a little-known area of research: the at-scale adaptation of coral to the effects of warming oceans and bleaching, and new approaches to reef restoration. The back-to-back bleaching events of 2016/17, which impacted the GBR, Scott Reef and other reefs in WA and around the world, brought this work into increased focus. In response, AIMS brought together a consortium (which includes CSIRO, GBRMPA, JCU, UQ, QUT, GBRF and others) to investigate the long term, at-scale potential of these ideas. Earlier this year, the Government provided \$6 m to AIMS and CSIRO to develop a concept feasibility study and design a comprehensive reef restoration and adaptation R&D program. The long term objective of the program is to provide government with options for reef restoration and adaptation. Currently, such options do not exist. The outputs of the current study, to be delivered early next year, will include a comprehensive R&D plan, community and social engagement strategy, proposed governance structure for further activity, indicative costings for future phases of work, and a cost-benefit analysis.

To be clear, R&D into reef restoration and adaptation is new, and would complement current traditional measures to improve reef resilience (such as water quality and COTS control). This is about actively intervening on the reef to help it adapt, recover and survive warming conditions. Adaptation and restoration alone cannot save the reef. This is about buying time for the reef while the world acts to reduce emissions and stabilise global temperatures.

AIMS focusses on delivering measurable positive impact for the nation, for its valuable marine ecosystems, and for the industries and communities that rely on our oceans. We recognise the trust

that the Australian Parliament and people put in us, and are proud of our on-going contribution to the health and sustainable productivity of our marine estate. Thank you.