

Media Release

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ZooX™ Atlas to spearhead new reef protection campaign

Funding generated by the ZooX™ Fund will be utilised to create an unprecedented snapshot of the risks and responses to pressures affecting the Great Barrier Reef.

The ZooX™ Atlas project will generate a series of research initiatives to provide a comprehensive understanding of the threats to the Reef and enhance Australia's capacity to respond to those threats.

The Atlas will "map" all levels of risk and resilience within the Great Barrier Reef coral network, focusing not only on the effects of climate change, but also on other risks to the Reef such as declining water quality in coastal areas.

Mapping will be based on a range of indicators, including geographic location, cold water upwelling forecasts, species composition of coral assemblages and genetic predisposition to bleaching caused by warming.

"Resilience is the Reef's ability to survive pressures such as bleaching events and to recover after disturbances such as floods and cyclones," said Judy Stewart, CEO of the Great Barrier Reef Foundation (GBRF).

"The present strategy for managing the risks of climate change is to enhance the resilience of the Reef by reducing pressure on it through Reef-wide programs such as fisheries management, zoning plans and water quality policies," said Mrs. Stewart.

"This first initiative of the Foundation's ZooX Fund will go beyond generalised management and allow for more targeted action to occur, such as accelerating the implementation of the Reef Water Quality Protection Plan, a joint program of the Australian and Queensland governments.

"Importantly, the Atlas will lead to clarification of the genetic markers for variations in thermal tolerance of corals and zooxanthellae, as well as unlock other vital information, which ideally will feed into projects being undertaken by other agencies, including the Marine and Tropical Sciences Research Facility and the Great Barrier Reef Marine Park Authority."

Mrs Stewart said coral reefs are a high profile "first casualty" to the impact of climate change on the natural environment.

"Coral reefs are emblematic for Australia and the effect of climate change on them is stark in its effects: corals turn white, stop growing and reproducing and soon die, across hundreds if not thousands of square kilometres of reef over very short periods.

"As corals produce the habitat in which thousands of other organisms live, fisheries are supported and tourism experiences are built, the loss of corals and reef-building activity in Australia would translate into both major economic and social losses for Australia, on top of the obvious environmental impacts.

"Unfortunately, while we know quite a bit about the expected stresses on corals and the reefs they build, coral reefs are extraordinarily complex ecosystems and reef managers are in a relatively poor position to 'manage for resilience' when it comes to coral reefs.



“At present, we do not know why some corals are more robust than others, or which areas of Australia’s coral reef ecosystems are more vulnerable.

“We still don’t know how the genetics and ecology of the symbiotic relationship between corals and zooxanthellae operate over large geographic scales. We don’t know much about the synergies between local stresses like water quality and climate change.

“Given limited resources to build understanding of the complexity contained in Australia’s reef systems, gaining insights into these questions will be essential for targeting management interventions in a cost-effective way,” Mrs Stewart said.

“Further projects and other collaborative activity needed to produce a complete risk assessment will be designed by the Foundation, in consultation with its International Scientific Advisory Committee and in partnership with the key research and management agencies on the Great Barrier Reef.”

The ZooX™ Fund is an initiative of the Great Barrier Reef Foundation, an independent organisation which brings together the financial strength of Australia’s business community to assist eminent marine scientists in finding ways of preserving Australia’s greatest natural wonder.

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