

**NOTE STRICT MEDIA EMBARGO – NOT FOR PUBLIC RELEASE BEFORE 2PM EST ON PUBLICATION DATE FEB 20**

## Evaluating the beauty of the Great Barrier Reef

### ***Australians help science by identifying what truly makes the Great Barrier Reef 'beautiful'.***

Environmental managers of the Great Barrier Reef will benefit from new research led by CSIRO that identifies indicators for monitoring coral reef aesthetics.

Conducted by Australia's national science agency and involving hundreds of Australians, the research helps Reef managers to improve monitoring and management of these aesthetic values, which can also align with scientific indicators for coral reef health.

Senior Social Scientist and CSIRO project leader Dr Nadine Marshall said most Australians and international visitors know intuitively what a beautiful coral reef looks like, but we each observe and appreciate different parts of a rich and complex coral reef scene.

"This makes it challenging to identify common and objective features of a 'beautiful' coral reef for monitoring and assessment purposes."

CSIRO researchers, funded by the [Tropical Water Quality Hub of the Australian Government's National Environmental Science Program](#) conducted an online survey involving more than 1400 Australians who compared 181 carefully selected photographs emphasising different features in coral reef scenes. The researchers were then able to establish a set of common indicators that are statistically robust.

"Prior to the online survey we compiled a long list of aesthetic features from interviews with people passionate about coral reefs, including Reef managers, photographers, tourism operators and scientists," Dr Marshall said.

This was narrowed down through our survey to five main attributes, including:

- the proportion of live coral cover,
- the shapes and patterns of coral colonies,
- the topographical complexity (i.e. physical features to explore and that provide habitat for marine animals),
- fish abundance and
- visibility and clarity of the water.

The latter three of these attributes were the strongest predictors of whether a coral reef scene would be rated as aesthetically beautiful by most people. CSIRO also found that these attributes correlated strongly with marine scientists' assessment of coral reef health, making them a useful proxy in many places where long-term scientific monitoring is not feasible.

Great Barrier Reef Marine Park Authority Reef Knowledge Director Dr Roger Beeden said this research is beneficial to Reef managers as it provides standardised guidance for recording, monitoring and managing the aesthetic values of the Reef.

“Having an understanding of the Reef’s aesthetic values is important to Reef managers as the beauty of the Reef is a key contributing factor to its Outstanding Universal Value and World Heritage listing,”

“We’ll consider this work in the development of our [Reef 2050 Integrated Monitoring and Reporting Program](#) and our existing [Eye on the Reef](#) monitoring program”.

The next stages for the research project involve working with Traditional Owners, community groups and the tourism industry to integrate the indicators with existing monitoring programs.

Findings from the study will be published today in international journal PLOS ONE. The research (available at <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0210196>) will be used to improve assessment and monitoring of the Great Barrier Reef for its ongoing management.

ENDS