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Coal reefs, climate change and environmental disturbance: past, present and future.

Thursday 26 April 2012 1 pm

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Gould seminar room, Building 116, Daley Rd, ANU



Managing coral reefs for the future requires information on how reef systems are functioning. This can include information on rates of reef growth and destruction, recruitment success, prevalence of disease, sources of pollution, and changing environmental conditions.

A potential way to assess reef health is to take a bio-physical process-based approach. As part of a Caribbean Integrated Watershed and Coastal Areas Management programme (IWCAM) we instigated some simple, cost effective methods that enabled managers in the Caribbean to assess reef health. We designed a basic 'reef growth' versus 'destruction' model using a combination of in-situ diver observations and experiments to enable managers to assess current and future reef health. We are now adapting this model and testing it in the Great Barrier Reef. Having identified healthy, stressed and

deteriorated reefs we are currently using geochemical methods (e.g. stable isotopes and trace elements) in the Great Barrier Reef and Caribbean in order to determine: 1) how these sources of the local and environmental stress have changed over time in relation to catchment land-use and climate change, and 2) what this means for reef growth, community development and framework accretion.

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