

NERP Tropical Ecosystems Hub Project Factsheet

Conservation planning for a changing coastal zone

Project leader: Professor Bob Pressey (JCU)

Project summary

Using a conservation planning approach, this project sets out to identify key priorities for protecting and restoring coastal ecosystems in the Great Barrier Reef World Heritage Area (GBRWHA). The work will take into account changing land use, expanding infrastructure and climate change.

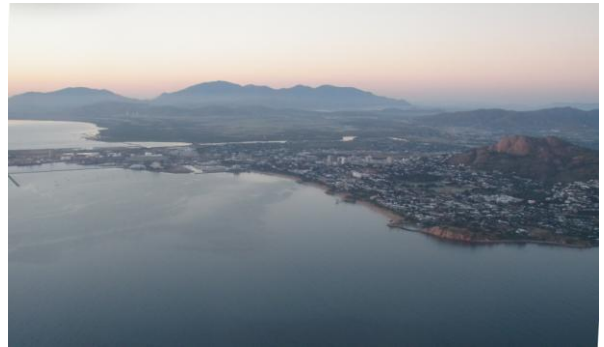
Why this research is needed

This project will address limitations of previous conservation planning research. It will take into account the dynamic nature of biodiversity and land uses. It will also consider the interactions between land and sea which are sometimes ignored in planning. The project will link cutting edge methods for conservation planning to analysis of governance and closely collaborate with stakeholders in multiple sectors.

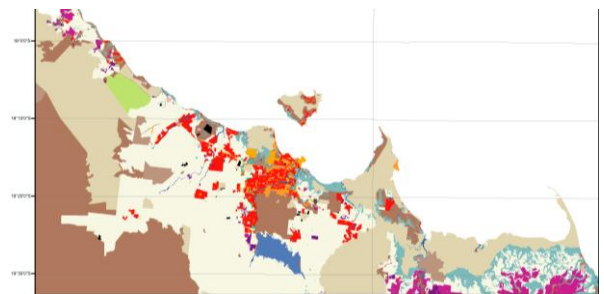
Research-user focus

The results of this project will guide planners and managers in resolving trade-offs between conservation objectives for terrestrial, freshwater and marine environments. Research-users include the Department of Sustainability, Environment, Water, Population and Communities, the Queensland Department of Environment and Heritage Protection, Great Barrier Reef Marine Park Authority, the Association of Marine Park Tourism Operators, Traditional Owners, Reef Rescue, Terrain NRM and WWF.

Project Partners:



Example of a changing coastal zone in the GBRWHA: Townsville, Queensland. Spatially explicit decision-support tools can help resolve conflicts between goals.



Land use and habitat mapping are used to produce coastal development scenarios to determine alternative futures for the GBR coastal zone.

Images (from top): Amélie Augé; data from the QLUMP Project.

Outcomes

- Compilation of all available data on coastal ecosystems and their biodiversity patterns and processes and key socio-economic variables.
- Models of alternative futures for the coastal zone, considering climate change, change in land use and infrastructure and effects of land uses on water quality in the Great Barrier Reef lagoon.
- A set of goals for coastal ecosystems and their biodiversity patterns and processes and for development, access and use of the coastal zone.
- An assessment of the strengths and limitations of governance in the coastal zone, with insights into how governance can be better coordinated and recommendations on the feasibility and potential effectiveness of new instruments for management.
- Application of decision support tools to involve stakeholders in resolving issues over land and water use.

Find this project at www.nerptropical.edu.au

Theme 3: Managing for Resilient Tropical Systems

Program 9: Decision support systems for GBR managers

Project: 9.4

For more information about this project, contact:

Professor Bob Pressey (James Cook University)

bob.pressey@jcu.edu.au