

estimated from the habitat areas (coral reefs and seagrass) exposed to defined pollutant thresholds (observed or modelled) and this was combined with river pollutant load information to develop priorities for regional management areas within the GBR Catchment. The assessment showed distinct differences between NRM regions and between catchments within the regions in terms of potential impact from each pollutant and for coral reefs and seagrass meadows. The results, in conjunction with information on pollutant generation from dominant land uses in the GBR Catchment, are used to inform investment priorities both between and within NRM regions.

CBM-05.5, July 10, AUSAID2, 11:30

Hazard assessment for water quality threats to Torres Strait marine waters and ecosystems

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The Torres Strait marine environment is of national and international significance. It includes critical coral reef and seagrass habitats, many species of fish, invertebrates and turtles, and one of the largest dugong populations globally. The region faces global pressures, such as increasing shipping traffic, demand for peak oil and impacts associated with climate change that could have complex impacts on Torres Strait's environmental assets, particularly when combined with local pressures. We undertook a qualitative assessment of the key threats to the Torres Strait region from water quality issues. The supporting information included analysis of remote sensing imagery, development of a hydrodynamic model, island inspections and a desktop review of previous studies. We concluded that the current hazards to the environmental values of the region from water quality are relatively minor, and are specific to local areas. However, a number of important future threats were identified. Most importantly, the potential hazards from the transit of large ships through the region, including oil or chemical spills and groundings, are of greatest concern due to the potential for long term retention in the Straits. Large scale development in Papua New Guinea including gas platforms, oil palm expansion and port development may also be significant. This study has provided the first hazard assessment of water quality issues in the Torres Strait region and provides guidance for environmental managers to make decisions regarding the relative importance of pollutant sources at a range of scales.

CBM-05.6, July 10, AUSAID2, 11:45

Prioritizing cost-effective management projects to improve water quality in the Great Barrier Reef

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Half of the Great Barrier Reef's (GBR) coral cover has been lost since 1985. One of the most significant threats to the GBR is the declining water quality from land-based run-off. A significant amount of funding has been committed by the Australian government to invest in catchment management in order to improve downstream water quality. However, a transparent and economically sound investment prioritisation process for the allocation of funds does not exist. Here we present an approach that explicitly considers the economic costs, feasibility, and

