

Aquatic Conservation Assessment (ACA) for the riverine and non-riverine wetlands of the Southern Gulf Catchments (v1.1)

Information sheet

The Queensland Department of Environment and Science (DES) has completed Aquatic Conservation Assessments (ACA) for five catchments in the Gulf of Carpentaria using the Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM). Aquatic Conservation Assessments involve a non-social, non-economic and tenure-blind assessment of aquatic conservation values. The AquaBAMM uses criteria, indicators and measures to assess the relative conservation values of wetlands at the individual wetland or riverine subsection scale.

The area covered by this assessment totals 85,468 square kilometres (8,546,795 ha) and includes the Settlement Creek, Leichhardt River, Nicholson River, Morning Inlet and Mornington Island (Wellesley Island group) hydrological basins in the north-western part of the state. Separate assessments have been completed for riverine (Figure 1) and non-riverine (Figure 2) freshwater wetlands within each catchment.

The results from the Southern Gulf Catchments Aquatic Conservation Assessments indicated high proportions of wetlands with high or very high aquatic conservation values. These results can be attributed to a landscape with highly intact wetlands, minimal intensive landuse or water regulation, high species and habitat richness and high numbers of wetlands containing special features or connectivity values.

Aquatic Conservation Assessments provide a comprehensive set of baseline ecological information and an overall assessment of aquatic conservation value (AquaScore) at the individual wetland or subsection scale. Results from the Southern Gulf Catchments assessments fill an important gap providing critical information needed to support natural resource management, environmental risk mitigation and regulatory implementation.

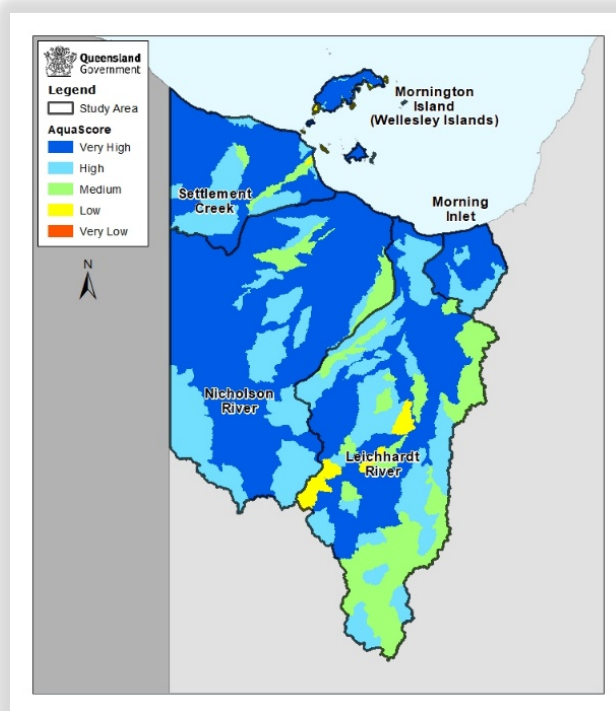


Figure 1. SGC ACA - Riverine Results

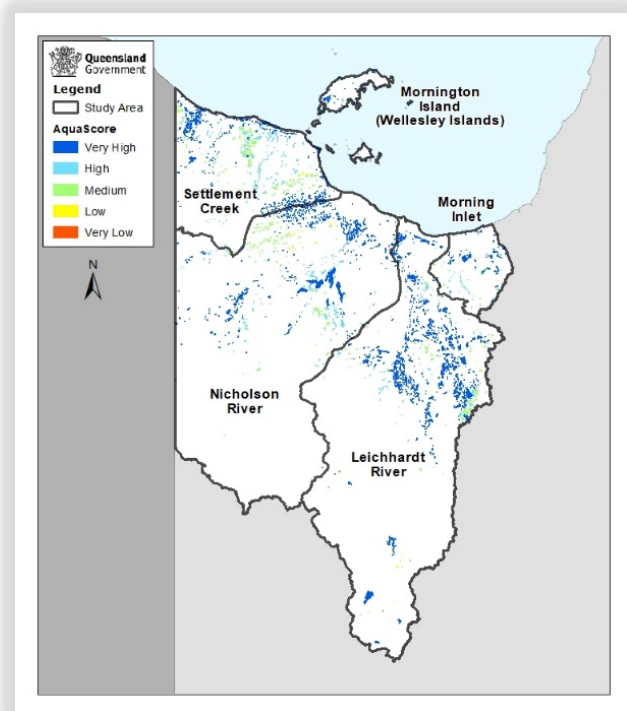


Figure 2. SGC ACA – Non-riverine Results

What is AquaBAMM?

The Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM) is a comprehensive method developed by DES for assessing the conservation values of wetlands. The method identifies relative wetland conservation values within a specified study area (usually a catchment) using available data and expert opinion. AquaBAMM results provide a powerful decision support tool that is easily interrogated through a Geographic Information Systems (GIS).

Any assessment of natural values is limited by available data. Consequently, there is important need for information that is comprehensive and accurate, both in terms of describing the value, and in defining its spatial extent within the landscape.

Aquatic Conservation Assessments undertaken using AquaBAMM provide a non-social, non-economic and tenure-blind assessment of wetland conservation values at a user-defined scale. The method is based on a series of criteria, indicators and measures founded upon a large body of national and international literature.

Measure data are mathematically combined into scores at the indicator and criterion level. A decision filter table comprised of a series of if/else statements is then used to calculate an overall aquatic conservation score (AquaScore) (Figure 2).

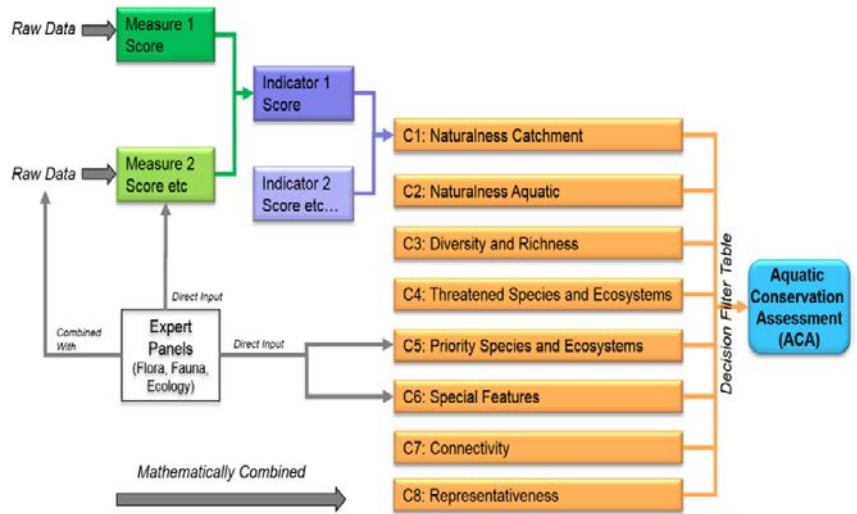


Figure 4. The AquaBAMM hierarchical structure

AquaBAMM applications

Aquatic Conservation Assessment results have application in:

- Matters of State Environmental Significance (MSES)
- determining priorities for protection, regulation or rehabilitation of aquatic ecosystems
- on-ground investment in aquatic ecosystems
- development assessment
- local and regional planning processes
- contributing to impact assessment of large-scale development
- water resource management and planning processes.

Assessments conducted to date

Aquatic Conservation Assessments undertaken using the AquaBAMM have now been completed for the state providing comprehensive information to support natural resource management and planning decisions at a range of scales (Figure 3).

Accessing AquaBAMM results

The AquaBAMM methodology and assessment results (including summary report, expert panel reports and GIS results) are available from:

- WetlandInfo - <http://wetlandinfo.des.qld.gov.au/wetlands/assessment/assessment-methods/aca/>
- WetlandMaps - <http://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/get-mapping-help/wetland-maps/>
- Queensland Spatial Catalogue - <http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>
- Queensland Globe - <https://qldglobe.information.qld.gov.au/>
- Biomaps - <http://qldspatial.information.qld.gov.au/biomaps/>
- Environmental Reports Online - <https://apps.des.qld.gov.au/report-request/environment/>

Further details about AquaBAMM or the ACAs can be obtained by emailing: biodiversity.planning@des.qld.gov.au

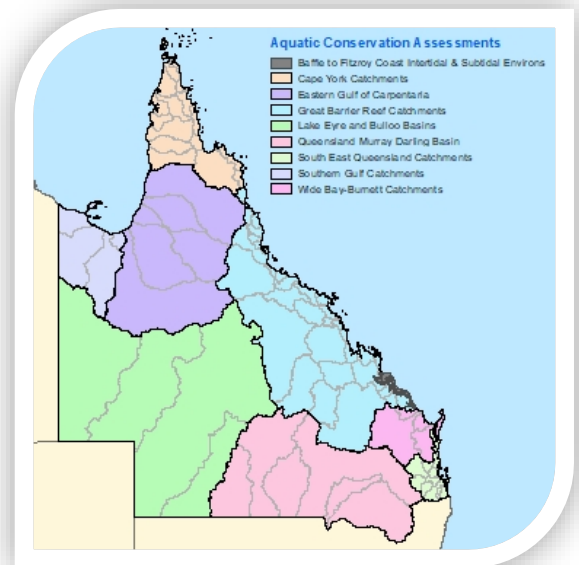


Figure 5. Areas covered by released ACAs