

Aquatic Conservation Assessment of Queensland Murray-Darling Basin riverine and non-riverine wetlands (v2.0)

Information sheet

In 2021 the Queensland Department of Environment and Science (DES) will undertake an update of the Queensland Murray-Darling Basin (QMDB) Aquatic Conservation Assessment (ACA) using the Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM).

ACAs involve a non-social, non-economic and tenure-blind assessment of aquatic conservation values. The assessment method (AquaBAMM) uses criteria, indicators, and measures to assess relative wetland conservation values at the individual wetland or subsection scale.

ACAs for the QMDB's catchments were previously completed in 2011. This project will seek to incorporate updated expert panel decisions, special feature mapping and aquatic species lists using current species sightings records, Queensland Wetland Mapping (version 5.0) and other relevant ecological datasets.

ACA results include a comprehensive set of baseline ecological information, and an overall assessment of aquatic conservation values (AquaScore) at the individual wetland or subsection scale.

ACAs have now been completed for all of Queensland. Results from this update will support natural resource management decisions, regional planning, regulatory implementation, and other wetland conservation policy, planning and management efforts affecting QMDB wetlands.

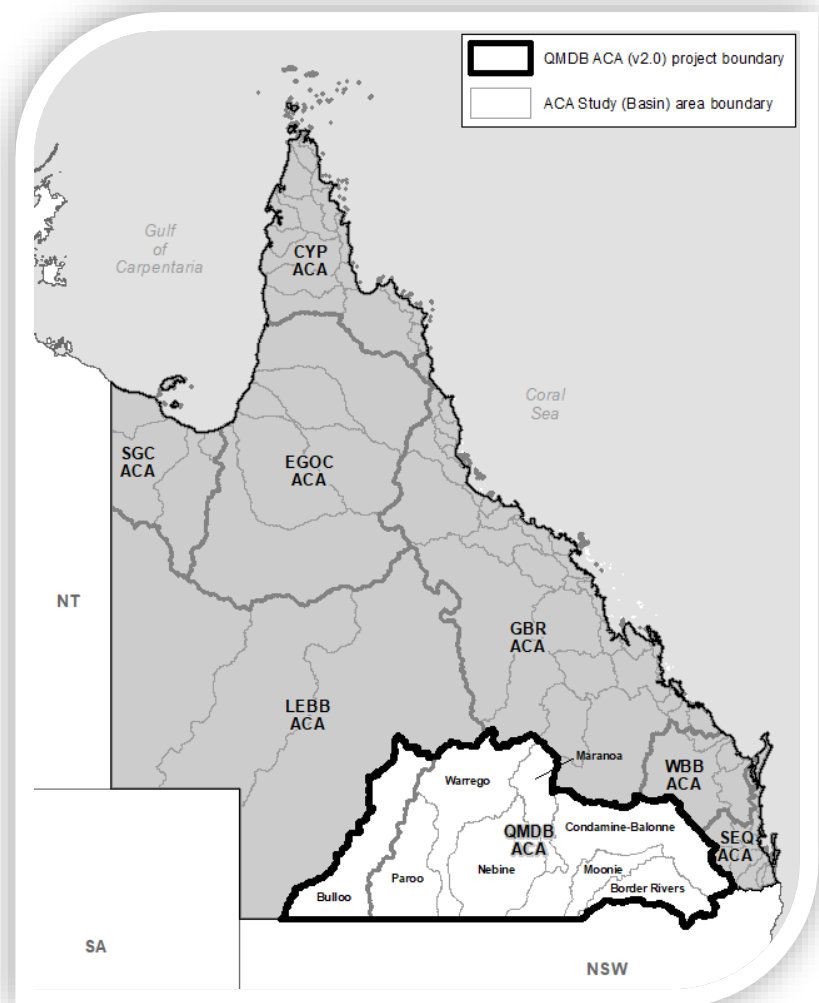


Figure 1. QMDB ACA project area.



What is AquaBAMM?

The Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM) is a comprehensive method used to assess 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 an 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. ACAs 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).

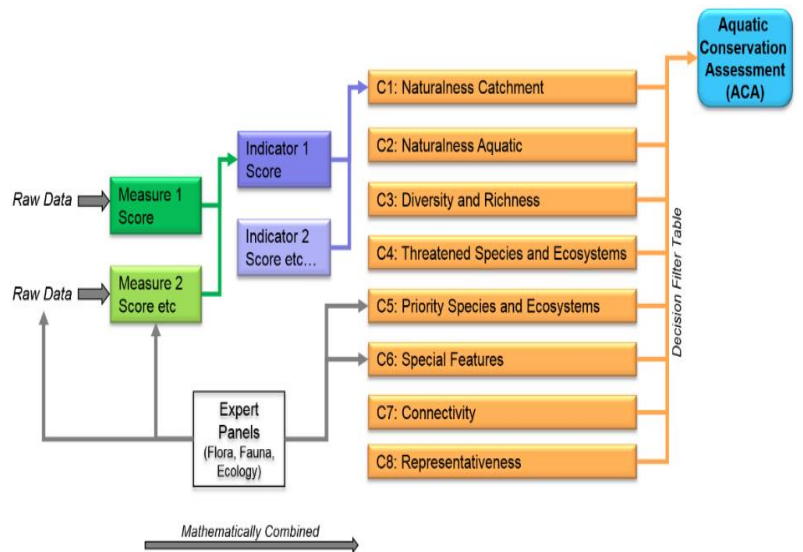


Figure 2. The AquaBAMM hierarchical structure

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.

The AquaBAMM criteria are also consistent with nationally agreed guidelines for identifying high ecological value aquatic ecosystems (i.e. HEVAE).

Assessments conducted to date

Aquatic conservation assessments undertaken using the AquaBAMM have now been completed for all of Queensland providing important baseline information supporting 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://www.qld.gov.au/environment/pollution/management/environmental-reports-online>

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



Figure 3. Areas covered by released ACAs