

Aquatic Conservation Assessment (ACA) for the riverine and non-riverine wetlands of the Queensland Murray-Darling and Bulloo Basins (v2.1)

Information Sheet

The Queensland Department of Environment and Science (DES) has completed Aquatic Conservation Assessments (ACA) for eight catchments in the Queensland Murray-Darling and Bulloo Basins (QMDBB) using the Aquatic Biodiversity Assessment and Mapping Method (AquaBAMM).

The area covered by this assessment totals 315,142 square kilometres (31,514,255 ha) and includes the Border Rivers, Moonie, Condamine-Balonne, Maranoa, Wallam, Warrego, Paroo and Bulloo hydrological basins in the southern part of the state. The Bulloo River drainage basin has been included in this assessment where it was previously included in the Lake Eyre and Bulloo Basins ACA (version 1.1). The main reasons to include it, was that the Bulloo basin falls under the Southern Queensland Landscapes Natural Resource Management (NRM) body and that DES incorporates the basin as part of the Warrego, Paroo, Bulloo and Nebine Healthy Waters Management Plan.

Separate assessments have been completed for riverine (Figure 1) and non-riverine (Figure 2) freshwater wetlands within each catchment.

The results from the QMDBB ACA indicated a difference between eastern study areas of the Condamine-Balonne, Moonie Basin and Border Rivers with generally Low conservation values, compared to the western study areas with generally High conservation values. These results can be attributed to a landscape that is highly variable in agricultural intensity and water regulation by modified wetlands. Across all catchments there is a high species and habitat richness and high numbers of wetlands containing special features but few with significant connectivity values.

Acknowledgement of Country

The Department of Environment and Science acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and custodians of the land. We recognise their connection to land, sea and community, and pay our respects to Elders past, present and emerging.

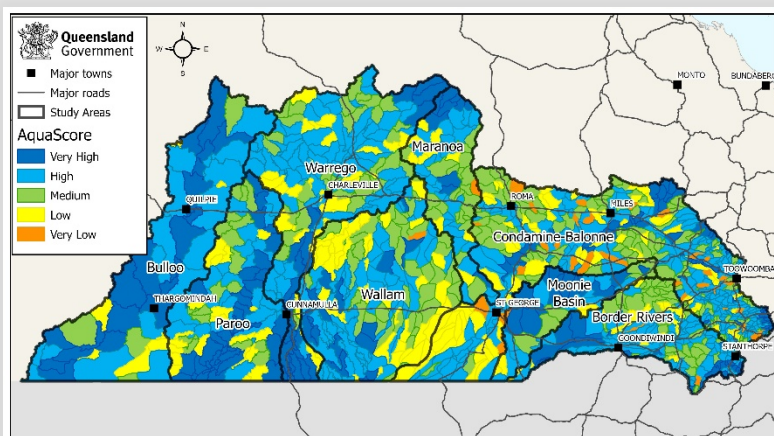


Figure 1 QMDBB ACA – Riverine Results

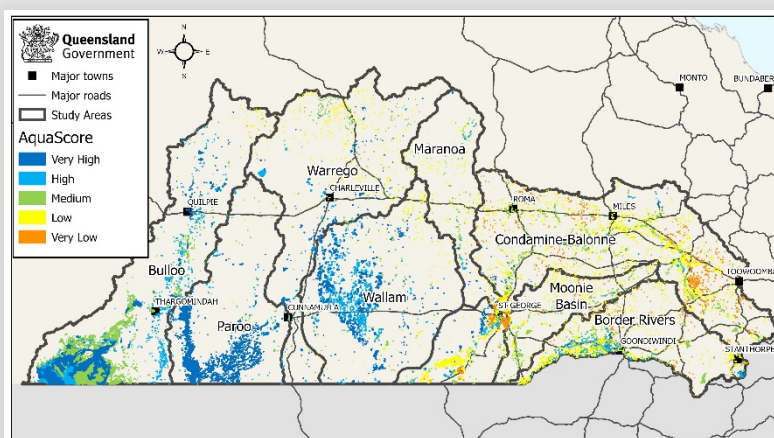


Figure 2 QMDBB ACA – Non-riverine Results

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).

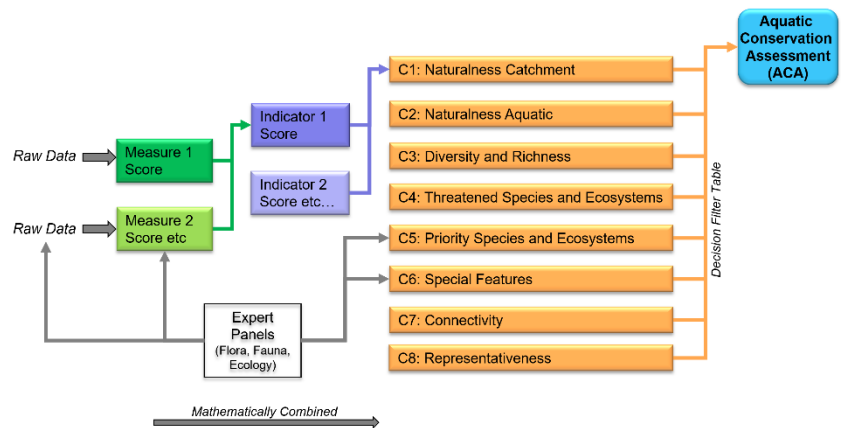


Figure 4. The AquaBAMM hierarchical structure

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

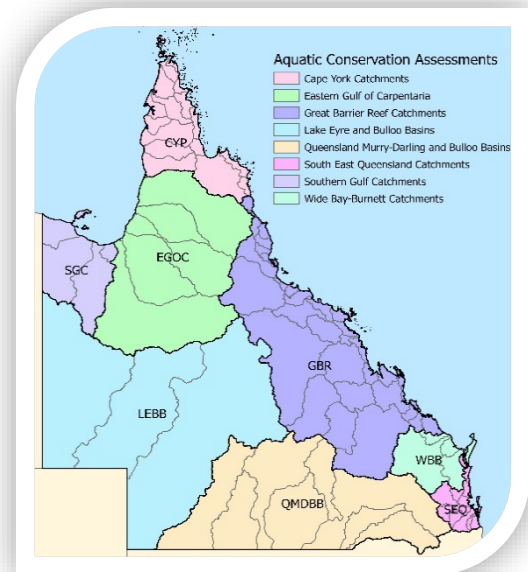


Figure 5. Areas covered by released ACAs