Status of wetlands in

northern Australia

Abstract and presentation made at 2nd National Conference on Aquatic Environments: Sustaining our Aquatic Environments – Implementing Solutions, Townsville, 20–23 November 2001

CM Finlayson & GP Lukacs

June 2003



Supervising Scientist

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Abstract

Compared to southern Australia it is generally considered that wetlands in northern Australia are generally 'intact' and possibly close to 'pristine'. With the exception of a few specific areas we accept the comparison, but baulk at making a categorical statement that supports the impression that northern wetlands are in good condition. Without getting into an esoteric debate about concepts we provide an analysis of pressures on northern wetlands and point to major concerns for the future. We do this by assessing the extent of wetland inventory information and recommend that a coordinated approach using standardised protocols and core data is needed to complete the picture and make this available to users. Further, ecological assessment, including structured risk assessment of pressures is urgently needed. This not only provides a considered base for management actions but also for further prioritisation of research effort. We then identify major research topics that need to be addressed.

Our analysis is essentially based on the biophysical features of northern wetlands. These are valuable and in some instances well known and protected. However, in order to conserve and ensure wise use of wetlands we contend that this approach is insufficient. We propose that a stronger emphasis be placed on sustainable use of the goods and services which wetlands provide humans. The challenge is doing this is to demonstrate through research activities that the provision of these goods and services is dependent on the maintenance of wetland habitats and their species. The case for doing this is illustrated through a framework relating goods and services to ecosystem components and thence to pressures that could degrade these, including the emerging pressures of globalisation of trade and global climate change, and the research required to understand these sufficiently well to support management responses.

Powerpoint slides

Status of wetlands in Northern Australia

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Wetland information base - uneven, outdated, lacking

		•
Wetland area (km ²) in wet-dr	y trop	ICS
Auslig 250k	89 704	1
Digital Chart of the World	70 078	
Matthews natural wetlands	35 649	
DISCover land use - IGBP	4 727	
Directory of Important Wetlands	30 849	
CSIRO wetland database	18 539	







Biophysical data

- Site name (official name of site and catchment)
- Area and boundary (size and variation, range and average values)
- Location (projection system, map coordinates, map centroid, elevation)
- Geomorphic setting (where it occurs within the landscape, linkage with other aquatic habitat, biogeographical region)
- General description (shape, cross-section and plan veiw)
- Climate zone and major features
- Soil (structure and colour)
- Water regime (periodicity, extent of flooding, source of surface water and links with groundwater)
- Water chemistry (salinity, pH, colour, transparency, nutrients)
- Biota (vegetation zones and structure, animal populations and

distribution, special features including rare/endangered species)













































