

# Sharing Sweet Water: Culture and the Wise Use of Wetlands In Western Australia



**Alan L Hill**

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This thesis is presented for the degree of  
Doctor of Philosophy of Murdoch University 2013

School of Environmental Science  
Faculty of Science and Engineering  
Murdoch University  
Perth, Western Australia

Cover Plate: Artwork by Rebecca Hill.

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I declare that this thesis is my own account of my research and contains as its main content work that has not previously been submitted for a degree at any tertiary education institution.

.....  
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# Sharing Sweet Water: Culture and the Wise Use of Wetlands In Western Australia

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## Abstract

*The similarities and differences in traditional, contemporary and global/international cultures' development and use of institutions for the wise use of wetlands are explored across Western Australia. A process grounded in social anthropology is used to test a research hypothesis and to assess the structure and function of the diverse cultures' institutions and empathy for wetlands. Six thematic case studies were located in catchments on Perth's Ridge Hill, Perth's Eastern Hills, Perth, and Western Australia's Swan Coastal Plain, the Southwest, and its rangelands. Sources of evidence also include the literature on Aboriginal Australia, an extensive and detailed ethnographic review of regional and historic documents, the scientific literature of strategic water, wetlands and environmental management, and three decades of the author's professional work.*

*This analysis demonstrates that traditional Western Australian cultures have diverse and effective institutions for sustainable use, conservation, protection and a well-developed empathy for their inland waters. In contrast, contemporary Western Australian cultures with some important exceptions do not, and are more accepting of the continuing exploitation and systematic destruction of the remaining natural waters, particularly in urban and agricultural areas of the Southwest. This recent destruction of wetlands is moderated occasionally by the efforts of traditional cultures, community and heritage organizations, sometimes through the use of contemporary planning and environmental protection institutions, and more rarely because of Australia's obligations to global Conventions. The analysis explains why better use of these institutions is essential. Opportunities for improving wise use of wetlands in Western Australia are identified.*

*Particularly important is the need for the more transparent engagement and regular reporting by the State of Western Australia in support of Australia's obligations to the global Conventions. This includes reporting on progress towards the establishment of nature reserves on Swan Coastal Plain wetlands under Article 4 of the Ramsar Convention. It includes reporting the meeting of National targets for protecting priority biodiversity of inland water ecosystems, the protection of the buffers of wetlands and waterways as parts of ecological corridors, and State-wide progress towards use of traditional ecological knowledge to the Convention on Biological Diversity. Reporting is needed on progress made towards implementing relevant Articles of the United Nations Declaration on the Rights of Indigenous Peoples. All reports might valuably include progress on identified new priority initiatives such as distributed network of wetland education centres, the better protection of monument wetland sites and improved indigenous heritage conservation. Such work, carried out in conjunction with Perth's Whadjug peoples, the Southwest's Nyoongar peoples, and the rangeland's Kimberley, Yarnangu and Yamatji peoples, will help the conservation of the State's inland waters as a necessary condition of human and ecosystem existence, as well as provide valuable common ground in which to practise tolerance, respect and cooperation between cultures. The better recognition of traditional ecological knowledge, the provision of more support for Indigenous engagement in wetland conservation, and the implementation of a far broader range of effective institutions are all identified as essential requirements for moving towards the wise use of wetlands in Western Australia.*



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This project investigated the traditional, contemporary and global cultural institutions, which have supported the wise use of wetlands in Perth, the Southwest, and the rangelands of Western Australia. It provides an improved introduction to the traditional ecological knowledge systems of the Perth Whadjug, the Southwest Nyoongar, and the rangeland's Kimberley, Yamatji and Yarnangu, who appreciated the life and value of inland waters and applied a diverse range of institutions for their conservation, protection and sustainable use. I acknowledge here reference to an important North East Arnhem Land song cycle (Berndt, 1952), and two important traditional stories from North East Arnhem Land and Central South Australia (Berndt & Berndt, 1989).

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## Preface

This project tested a research hypothesis and completed the research tasks proposed in October 1999. It used thematic case studies to investigate regional similarities and differences and the diverse cultural institutions used for the wise use of wetlands in traditional, contemporary and global or international cultures. It also explored the concept of empathy for wetlands (McComb & Lake, 1990). Empathy is usefully defined in the Australian context as the “mental entering into the feeling or spirit of a person or thing, appreciative perception or understanding” (Butler, 2009:402).

A new application of social anthropology process is presented here drawing on the foundation works on ‘structure and function’ by Durkheim and Radcliffe-Brown, and Radcliffe-Brown’s ‘total functionalism’ hypothesis (Radcliffe-Brown, 1922; 1935; 1952). The thesis analysis provides a model of the use of concepts valuable for moving towards a more empathetic cross-cultural sharing of knowledge and ecological responsibility in contemporary governance, in traditional, contemporary and international water and ecosystem management, and in particular in scientific work, supporting the wise use of wetlands.

The thesis also explored and analysed the content of Nyoongar traditional stories and other traditional works, published by Daisy Bates, Edith Hassell and Ronald and Catherine Berndt. The analysis contributes to a better recognition of the value of these traditional Australian institutions, and how they can still positively influence the wise use of wetlands and also the caring for and protection of country.

The first thematic case study in a small catchment on Kalamunda’s Ridge Hill showed the assembling and contemporary use of detailed previously dispersed traditional ecological and cultural knowledge was still possible. The following four case studies on the Perth hills, Perth, Swan Coastal Plain and the Southwest used different themes to investigate the wise use of diverse and important wetland values, and ecological services. The structure and function assessment, and then the nesting of southwest thematic case studies, provided an iterative and circumscribing investigative methodology, which led to continual leaps in understanding of Nyoongar traditional ecological knowledge. Assessment of each case study data, collated to address different specific themes, also greatly assisted the other case study explorations.

This spatial nesting of thematic case studies was confirmed as a successful method for investigating and better describing important traditional ecological knowledge and institutions, and while this thesis focused on Whadjug Perth, it also identified a need for future work to focus valuably on other Southwest first nations. The sixth case study explored protected area management in the rangelands by local/ Indigenous communities and the more respectful use and support for contemporary application of traditional ecological knowledge in wetland management. It confirmed that there are valuable, well-documented analogues in the rangelands areas that explain clearly important aspects of Nyoongar tradition.

This project provides support for a new period of the use and renewed understanding of Whadjug traditional ecological knowledge and also for further research on skin and totemic groups across the Southwest. The traditional stories and data recorded by Bates, Hassell and Berndt were found, with few exceptions, to be consistent and robust enough to be helpful for this work. Radcliffe-Brown's total functionalism hypothesis proved useful as it acknowledged the importance of: a commitment to the continued survival of Societies (traditional, contemporary and international); to addressing the necessary conditions of our continued existence; and the maintenance of social solidarity or cohesion among members through tolerance, and respect and cooperation. Radcliffe-Brown's work is put in a new light here, as providing insights that might benefit national discussions on the constitution or contribute significantly to work in reconciliation, co-management, or future wetland or conservation management plans.

This project considered ways to better recognise and implement the international conventions for wetlands (Ramsar), for the conservation of biodiversity (CBD), migratory species (CMS) and the United Nations Declaration on the rights of Indigenous peoples (UNDRIP). It notes the prescience of the original wording of these convention and declaration' Articles, and identifies important current and future opportunities for improvement in outcomes in wetland conservation in Western Australia.

This thesis is an overdue exploration of Perth, the Southwest and rangelands of Western Australia's traditional cultures and their institutions, and a highlighting of the opportunities for their continued application, for the protection, conservation and sustainable use of wetlands.

Assembling, appreciating and understanding of Whadjug Nyoongar traditional information from the dispersed sources was both the most difficult and the most rewarding part of this project. During the project, priceless damage to important religious Whadjug sites was observed, often unintended, and mostly occurring during routine works and management. The implementation of improved protective systems on these locally and nationally important monument wetlands and other heritage sites needs to be a priority in Perth and across the State.

Alan L Hill,  
Murdoch University  
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## Abbreviations and short forms of names

Indigenous	Australian Aboriginal (comprehensive name lists in Appendices)
UN	United Nations
Ramsar Convention	International Convention on Wetlands
CEPA	A communication, education and public awareness strategy
CBD	Convention on Biological Diversity
CMS	Convention on Migratory Species (Bonn Convention)
UNDRIP	UN Declaration on the Rights of Indigenous Peoples
JAMBA	Japan Australia Migratory Bird Agreement
CAMBA	China Australia Migratory Bird Agreement
ROKAMBA	Korean Australia Migratory Bird Agreement
IUCN	World Conservation Union
WWF	World Wide Fund for Nature
MA	Millennium Ecosystem Assessment
UNESCO	United Nations Education Scientific Organization
ICOMOS	International Council on Monuments and Sites
Water Convention	United Nations Economic Commission for Europe (UNECE) Convention on Transboundary Rivers and International Lakes
WFD	Water Framework Directive (European Commission)
AHRC	Australian Human Rights Commission
AHC	Australian Heritage Commission
DEH	Department of Environment and Heritage
DEWR	Department of Environment and Water Resources
DEWHA	Department of Environment Water Heritage and the Arts
DEWCAT	Department of Environment Water Culture and the Arts
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EPBC Act	Environmental Protection and Biodiversity Conservation Act
ABS	Australian Bureau Statistics
SWALSC	South West Aboriginal Land and Sea Council
NC	Ngaanyatjarra Council
YLSC	Yamatji Land and Sea Council
PNTG	Pilbara Native Title Group
GLSC	Gascoyne Land and Sea Council
KLC	Kimberley Lands Council
NAILSMA	North Australian Indigenous Land and Sea Management Alliance
EPA	Environmental Protection Authority
DCE	Department Conservation and Environment
DEC	Department of Environment and Conservation
DIA	Department of Indigenous Affairs
DAA	Department of Aboriginal Affairs
GoWA	Government of Western Australia
WAWA	Water Authority of Western Australia
DoW	Department of Water
WAPC	Western Australian Planning Commission
NRM	natural resources management
EMRC	Eastern Metropolitan Region Council
NGO	non-government organization
CCWA	Conservation Council of Western Australia