

**PROCEEDINGS OF THE AUSTRALIAN RANGELAND SOCIETY  
BIENNIAL CONFERENCE**

**Official publication of The Australian Rangeland Society**

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The reference for this article should be in this general form:

Author family name, initials (year). Title. In: Proceedings of the nth Australian Rangeland Society Biennial Conference. Pages. (Australian Rangeland Society: Australia).

For example:

Bastin, G., Sparrow, A., Scarth, P., Gill, T., Barnetson, J. and Staben, G. (2015). Are we there yet? Tracking state and change in Australia's rangelands. In: 'Innovation in the Rangelands. Proceedings of the 18th Australian Rangeland Society Biennial Conference, Alice Springs'. (Ed. M.H. Friedel) 5 pages. (Australian Rangeland Society: Parkside, SA).

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## Reading the signs: Arabana, water and country

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**Keywords:** cultural indicators, Australia, water, Arabana, Indigenous

### Abstract

Water is of paramount importance to all people that live in regions such as the Kathi Thanda Lake Eyre, Australia but to Indigenous people such as the Arabana it also holds immense cultural significance. Having lived in the region for thousands of years, Arabana people have worked out how to assess the ecological condition of their water sites in particular ways. This paper presents the results of a collaborative project designed to develop a suite of cultural indicators for water in the Kathi Thanda region. Based on a pilot study we present the 'signs' used by Arabana to assess condition, and discuss whether or not these can be used in more generic ways across the region to assist in broader river assessment processes. We conclude with some reflections on how the development of these indicators can be integrated with Western indicators in ongoing management.

### Introduction: cultural indicators and water

The 1990s saw much change to water policy in Australia, yet despite native title, Indigenous rights to and involvement in water resource management remained scanty. However, in 2004, the National Water Initiative (NWI 2004) documented for the first time Indigenous entitlements to water, trade and planning (see summary I Box 1).

#### **Box 1: Summary of Indigenous access to water to be achieved by :**

*Progress Indigenous access to water* including: a) *Water for Culture*: b) *Water for Economic Development*: c) *Leadership and Governance*:

**2. Water Planning:** This includes: (i) providing culturally appropriate resources and programs to build capacity in Indigenous communities, (ii) implementing leading practice strategies for Indigenous consultation, engagement and participation within government water planning and management activities, (iii) developing culturally appropriate methods to identify and incorporate traditional ecological knowledge into water planning and management activities, (iv) developing techniques to better quantify the water requirements of cultural values and identify how this can be achieved through water planning and management processes

**3. Remote community drinking water security (NWI 2012)**

While worthy in intent, there remains many difficulties in achieving these aims, including lack of consultation, and an incompatibility between world views around the values and management of water (Jackson and Langton 2012). As Gibbs (2010) notes, the embedded Eurocentrism inherent in most dominant water regimes in Australia can also marginalise Indigenous interests and their involvement in water resource management. Jackson (2006) adds that this creates a compartmentalisation of values which can mitigate against, rather than add to, effective water management. Various studies address this issue by suggesting the implementation of principles and guidelines for good practice in Indigenous engagement (Jackson et al 2012, Bark et al 2012) or by explicit incorporation and recognition of Indigenous values about water in management (Mooney

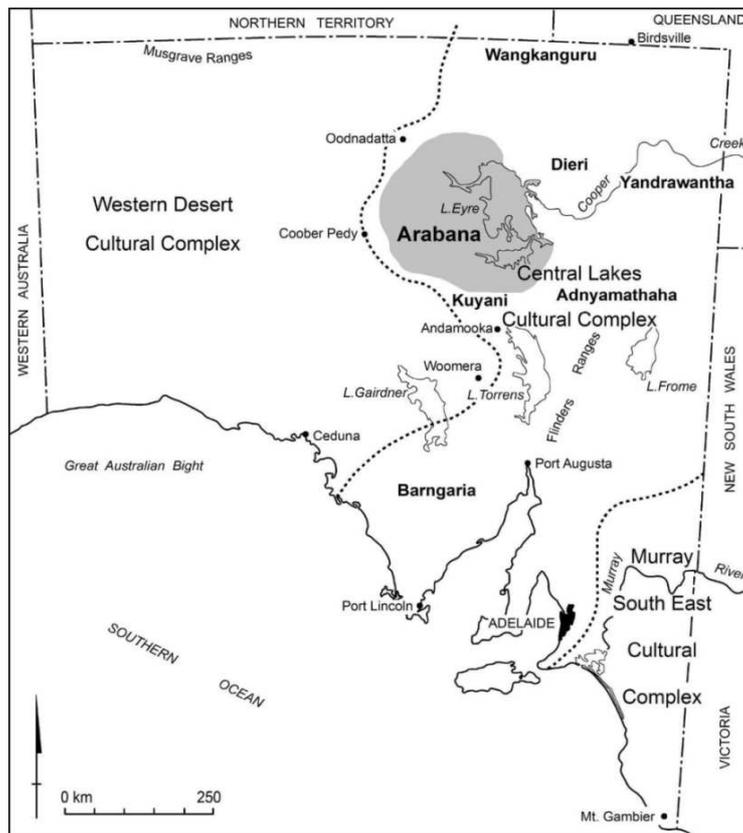
and Tan 2012, Ioris 2013). Increasingly, the creation of and then incorporation of cultural indicators is advanced as one way to build Indigenous perspectives into water management planning. Doing so has a number of advantages: (i) it fosters ongoing consultation with Indigenous groups, (ii) creates opportunities for documenting water issues at local scales, (iii) creates tangible means (via the indicators) by which other stakeholders can 'see' Indigenous aspirations and (iv) has potential to be integrated into other (scientific) indicator management frameworks. Substantive work has been undertaken in New Zealand on Maori cultural indicators including development of a Maori Cultural Health Index (Tupa & Teirney 2002, 2003). Jackson's work in Australia highlights the importance of – and the challenges in, recognising Indigenous perspectives in water planning (Jackson and Barber 2013, Jackson and Altman 2009, Jackson 2005, 2006, 2011). It is in this context, that we present a summary of a project that examined the development of cultural indicators for the Lake Eyre-Kathi Thanda region.

### **Cultural indicators and the Arabana**

Water is of paramount importance to all people that live in regions such as the Kathi Thanda Lake Eyre, Australia but to Indigenous people such as the Arabana, it also holds immense cultural significance. Having lived in the region for thousands of years, Arabana people have worked out how to assess the ecological condition of their water sites in particular ways. This project was part of a wider study designed to develop scientific indicators of environmental condition for the aquatic ecosystems of the Lake Eyre Basin (LEB). The project will build upon existing frameworks and methodological development activities to undertake analysis of new and existing data to identify a suite of useful condition indicators and associated threshold values and to research potential methodological approaches for using these to inform the assessment of environmental condition of LEB rivers as required under the LEB Intergovernmental Agreement (LEBIA) to which South Australia is a signatory. The recognition of cultural water and its potential links to economic productivity is a significant and emerging policy area in SA that will benefit from the proposed capacity development. The LEB Community Advisory Committee (CAC) and Scientific Advisory Panel (SAP) have identified the need to ensure that Indigenous perspectives are reflected in the assessments and monitoring activities under the LEB framework. This particular study was a pilot study designed to identify Aboriginal perceptions of indicators of environmental condition using both traditional and contemporary knowledge. Key aims included: (i) to engage with the Arabana community to undertake a case study of Indigenous condition perspectives on river health, (ii) to identify Aboriginal condition indicators (including spatial attribution of indicators) and values associated with water, (iii) to assess condition, identify threats, pressures and agree on indicators for measuring change, and (iv) to develop suggestions on ways to integrate Aboriginal and western science indicators of environmental health into assessments and reporting of Basin condition.

### **The Arabana**

The Arabana people are an Indigenous group located within the Lake Eyre Kathi Thanda region, a catchment that is the largest in Australia and spans three states and 1 Territory. Arabana people also due to colonisation have been dispersed across the entire continent, and live in Darwin, through to Adelaide respectively (see map 1 for details). Political leadership of the Arabana is vested within the Arabana Board of Directors, most of whom live in Port Augusta, yet there are important loci of traditional leadership (based in Alice Springs) and social leadership (Darwin) which contribute to the contemporary Arabana identity.



Map 1: Arabana Country. Reproduced with permission from C Crothers.

## Results

### Values

Arabana people conceptualise water in many ways: water from the mound springs, water from the river systems and water from man made bores, pipes and springs. In turn these different sources of water are valued in different ways: for cultural practice, as a representation of historical movements (for work and resulting from colonial dispersal), for personal and industrial use, and to assist in re-settlement on country. This study also confirmed Gibbs' (2010) finding that variability is part of how water is valued in this region – Arabana people often referred to the variability of and quantity of water, and how its very unpredictability heightened its importance in their cosmological and empirical relation to the country. An interesting dimension of the Arabana relationship to water is the way it has shaped Arabana history and drives current negotiations with other stakeholders such as the mining industry. The history of the Ghan railway or pastoralism in the region for instance, is for Arabana, an example of their recent historical interaction with water, and is marked by Arabana knowledge of where to find water and how to access it. Lack of water resulted in the closure of Finnis Springs, a pastoral station on Arabana country resulting in many Arabana people having to move from their country to live elsewhere. As part of their Native Title Determination, Finnis Springs was returned to the Arabana in 2013 and ongoing negotiation with mining companies has resulted in a pipeline recently being installed in Finnis, giving Arabana access to water, enabling them to return to and start living on country again..

### *Reading the signs – cultural indicators*

Arabana people understood or conceptualised cultural indicators as being the 'signs' by which they read the landscape and assessed its health and integrity. In this context, Arabana people used the following indicators: (i) presence of birds, (ii) presence of nests and eggs, (iii) amount of water present, (iv) colour of water present, (v) types of grass and other types of vegetation, (vi) history of

rain/weather in region, (vi) capacity to use the site (i.e. 'drinkability'), (vii) capacity to use the site (camping or ceremony), (viii) presence of reptiles (ix) presence of soakages, and whether or not they had water in them, and (x) existence of 'soil cracking', or areas where soil has split and dried up over time. Arabana people might seek different animals and plants at different sites based on their knowledge of that site. Arabana people also used social memory of place as an indicator; when visiting sites, the memory of previous experience of that site was used to comparatively analyse and assess its existing condition. Accessibility of and to the sites was also used as an implicit indicator – if it was difficult to get to a site because it was either too dry or too boggy, some estimation of the condition of the water site per se could be made. Finally, the existence of and level of threat to a site was an indicator used by Arabana to determine the potential future condition or viability of that site. Climate change, changes in water allocation, the extent to which mining companies sourced water, and rainfall, all were perceived as ongoing threats to water sites.

### Discussion and conclusion

The implications of these different conceptualisations of water mean that it is hard to create cultural indicators for water *just for the river systems*. In effect, Arabana do not differentiate between them, and thus do not conceive of water management for the river systems *only*; management is understood as being country based, and therefore applies across all water types, uses and systems. Further, understanding of site condition is embedded in a continuum of historical experience: appreciation of what happens to water sites over time and space, and the impact of colonisation and historical dispersal plays a very direct role in how Arabana understand and speak about water in their country today. Nonetheless, the nature of and ways in which Arabana assessed condition and the indicators they used can be strongly correlated with scientific indicators and hence form a useful basis for an integrated indicator framework. However, and importantly, Arabana people emphasised that a cultural indicator for water is also the extent to which they are involved in and resourced for water management on their country. An implication of this for the Lake Eyre Rivers Basin Assessment is that, in order to obtain ongoing value out of incorporating cultural indicators into management, or find 'cultural fit' in Lake Eyre Basin governance structures, investment in Arabana (or other Indigenous) rangers or community based monitoring and other water management programs will need to be made. Otherwise, the determination of cultural indicators runs the risk of becoming yet another way in which Indigenous interests, by being demarcated into a special 'cultural zone' will be separated from all other parts of water systems management – a result that ultimately is fundamentally oppositional to the holistic and integrated world view conveyed by the term 'caring for country'.

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