

Translating Ngarrindjeri Yannarumi into water resource risk assessments

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Cultural knowledge

Any cultural knowledge contained in this report remains the property of the Ngarrindjeri Nation.

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Warning: This report contains images of Ngarrindjeri people who have passed.

Executive Summary

Looking back at the past year as the Chair of the Ngarrindjeri Regional Authority [NRA], I am pleased to be able to say that the Kungun Ngarrindjeri Yunnan Agreement (KNYA) has been a success. The KNYA has provided opportunities for the Ngarrindjeri people to extend the work that we are doing as a Nation that otherwise would not have been possible. The negotiation of the KNYA between the NRA and the Government assisted us to address the terrible effects of the drought on our Ruwe Ruwar, which had caused great stress to the Ngarrindjeri people. We have achieved a number of positive outcomes through the KNYA that have helped to heal our Country and our people.

Another of the positive outcomes has been the opportunity to get to know Government people and to begin the process of creating a respectful relationship between them and the Ngarrindjeri people. My hope is that we can extend the KNYAs and respectful relationships we have begun with the current members of the Taskforce to all areas of Government.

With great sadness I also want to acknowledge and honour the contribution to the establishment and progress of the KNYA made by brothers George Trevorrow, Matt Rigney, and Robert Rigney, my nephew Steven Walker, and the many other Ngarrindjeri Elders, leaders and community members who have passed in recent times.

(NRA Chairperson and Ngarrindjeri leader Tom Trevorrow (deceased), excerpt from the inaugural *KNYA Taskforce Annual Report 2010–2011*, p. 6)¹

For decades Ngarrindjeri leaders and their supporters have challenged and partnered with the South Australian Government, including its natural resource management (NRM) representatives, over questions of justice, agency, sovereignty and the decolonisation of existing and long-standing relationships (see Ngarrindjeri Nation 2006; Hemming and Rigney 2019). There has been extended Ngarrindjeri participation in Commonwealth funded programs designed to address the catastrophic consequences of the Murray-Darling Basin's (MDB) Millennium Drought (2001-2009). After lengthy negotiations with the South Australian Government – producing a whole-of-government Kungun Ngarrindjeri Yunnan Agreement (KNYA – Listen to Ngarrindjeri Speaking) – Ngarrindjeri led the development of the Coorong, Lower Lakes and Murray Mouth (CLLMM) Ngarrindjeri Partnerships and Murrundi (Riverine) Recovery Projects (2009-2017) designed to build resilience to climate change and overextraction.² In 2015, the Ngarrindjeri Nation in concert with the South Australian Government, won the Australian Riverprize for best practice in river management, after developing and leading a comprehensive co-management strategy for the CLLMM and Mid-Murray regions. This collaborative research project, 'Translating Yannarumi in water resource risk assessments', represents an important refinement and application of this work.

Importantly, the project was identified as a direct response to the Commonwealth *Murray-Darling Basin Plan* (2012) requirement that Basin states, including South Australia, must meaningfully engage

First Nations in the development of Water Resource Plans (WRPs). This includes identifying First Nation's goals and objectives for the management of water resources and to have regard for Indigenous cultural values and uses. Basin States are utilising risk assessments to frame the development of the WRPs. The Department for Environment and Water (DEW) had no effective process to assess risks to Indigenous values and interests.³ This impacted on the state's ability to develop strategies to minimise these risks. This remains a significant policy gap for all Basin states. This Goyder Institute project was identified as a priority by DEW and was named in the *South Australian River Murray Water Resource Plan 2019* as a key research project designed to address the policy gap.⁴

The project team developed and tested a methodology that enabled the translation of Ngarrindjeri Yannarumi decision-making and assessment methodologies into existing water resource planning risk assessments. The methodology articulated the points of connection between the Ngarrindjeri Yannarumi assessment process and DEW's *Risk Management Framework for Water Planning and Management*. The project developed proposed changes to the *Risk Management Framework for Water Planning and Management* that includes a new multi-layered category of 'Risk to First Nations'. Crucially this category takes into account the quality of the relationship between First Nations and non-Indigenous governments. This is intended to inform future adaptations to the risk management framework and associated practices to support the integration of Indigenous values and interests. It extended and intensified a working relationship between non-Indigenous water planners and NRM risk assessors, and Ngarrindjeri leaders and water specialists. A *First Nations Engagement Guideline* was also developed, supporting the implementation of the modified risk management framework. We argue that this *Guideline* has value in broader Indigenous nation and government interactions in natural resource management (NRM) and across other sectors.

There is a common tendency in Australian Government planning contexts to characterise Indigenous people and their interests as a potential source of political risk. It has been argued that this fundamentally negative response is a direct consequence of the absence of treaties in Australia and the continuing uncertainty that this produces. Changing the character of interaction to one of possibilities, respectful relationships and interconnected benefit is a key feature of Ngarrindjeri strategies of engagement in NRM and water planning. As an example of negotiated, engaged and collaborative research, this project was designed to make a material contribution to the continuing hope for a just relationship between First Nations and non-Indigenous settler states.

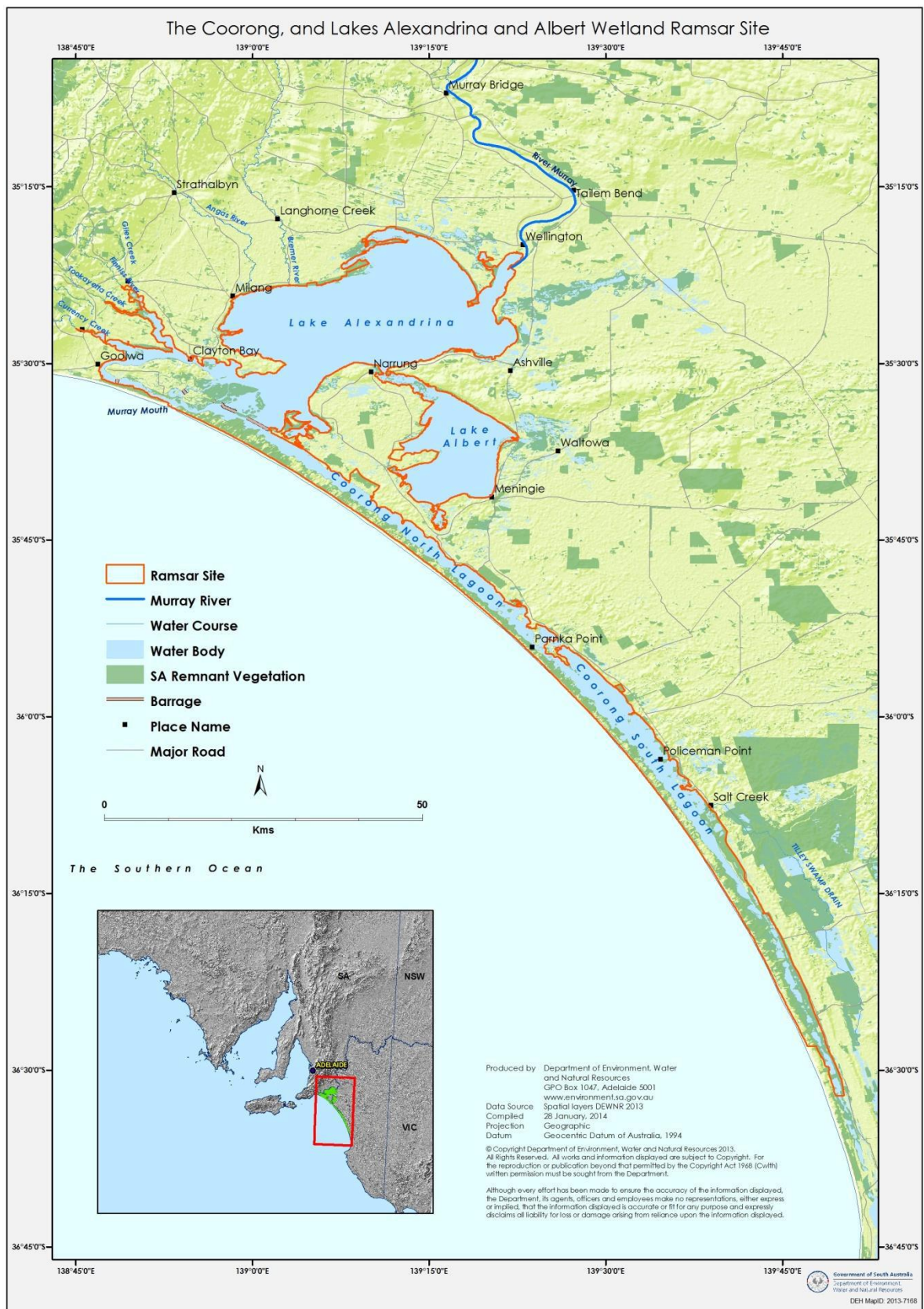


Figure 1. The Coorong, and Lakes Alexandrina and Albert Wetland Ramsar Site (Ngarrindjeri Yarluwar-Ruwe).

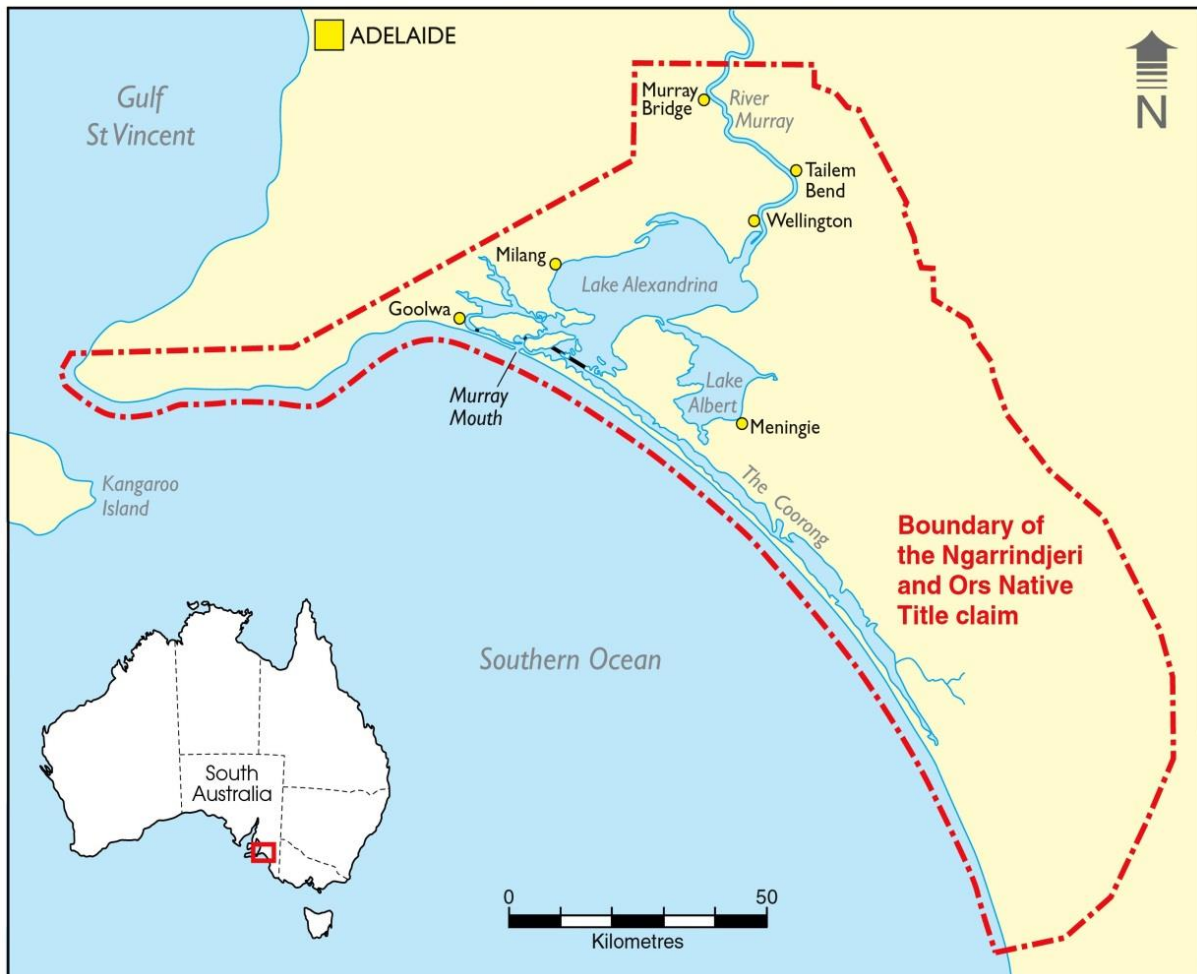


Figure 2. The original Ngarrindjeri and Others native title claim.



Plate 1. Ngarrindjeri water workshop, CSIRO Water-For-Healthy-Country Flagship Project, Camp Coorong, 2007. Source: Photo taken by and with permission of D. Sjöberg

¹ Tom Trevorrow (deceased) was a senior Ngarrindjeri member of the Ramsar Ecological Character Description Statement of Commitment Working Party – joint Ngarrindjeri and the South Australian Department for Environment, Water and Natural Resources (DEWNR) working party (See Hemming & Rigney 2016). He was instrumental in applying the Yannarumi methodology to the challenge of bringing Ngarrindjeri law, philosophies and ways of being into the key western planning settings of Ramsar wetland planning and ecological character descriptions. The South Australian Premier and the Leader of the Opposition attended his funeral in 2013.

² The CLLMM Ngarrindjeri Partnership Project and the Riverine (Murrundi) Recovery Project were components of the South Australian Government’s Murray Futures program funded by the Australian Government’s *Water for the Future* initiative.

³ DEW’s Risk Management Framework (2012, p. 18) had a category for risks to cultural, spiritual and religious values but there was no clear process for how these values would be assessed. It was assumed that Indigenous uses and values could be considered under these generic western constructs.

⁴ This Goyder Institute Yannarumi project was named in the *River Murray Water Resource Plan (2019)* and associated risk assessment documents as a priority South Australian government project designed to produce improved water resource planning risk assessment with the capability of identifying and addressing risks to Indigenous values and interests (see DEW 2019 *South Australian River Murray Water Resource Plan Area Risk Assessment*, DEW Technical report; DEW 2019, *South Australian River Murray Water Resource Plan 2019*, SA Department of Environment and Water, Adelaide, pp.154-155).

1 Introduction and overview: risk management, Indigenous wellbeing and Murray Futures⁵

Ngarrindjeri are part of the water. It is life, gives life, and is living. The cultural and spiritual relevance for Ngarrindjeri of water as a source of life and as part of the living body is that it flows, within, around and, through Ngarrindjeri country. The exercise of Ngarrindjeri cultural rights and the fulfilment of Ngarrindjeri responsibilities include being interconnected with and being part of the living water. The flow of water forms part of the interconnectedness of Ngarrindjeri to our country and the failure of water to flow into our country impacts upon our exercise of rights and our fulfilment of responsibilities as custodians of the land, water, and sky.

(Excerpt from Ngarrindjeri Regional Authority, Murray-Darling Basin Plan Submission 242, 25th September 2015)

1.1 Background

At the start of the new millennium, South Australia experienced the early stages of a major drought (the Millennium Drought) that severely restricted the flow of water through Ngarrindjeri Yarluwar-Ruwe (DEH 2010). This stark manifestation of human-induced climate change, combined with an over-allocation of water, led to massive degradation of the ecological health of the lower River Murray, Lakes Alexandrina and Albert, and the Coorong (see Ryan 2019). The lakes, Coorong and Murray Mouth is a freshwater and estuarine system that is identified as a Ramsar Wetland of International Importance and an 'Icon Site' in Australia's Murray-Darling Basin (MDB) (see Figure 1) (see Ramsar Convention 1971; Phillips and Muller 2006; Mosley et al. 2019).⁶ For Ngarrindjeri, central to this region's fragile ecology is the 'Meeting of the Waters', where fresh water combines with ocean saltwater in the tidal flows of the river mouth (see Bell 1998; DEH 2009; Hemming et al. 2002, p.13; MDBC 2006; Ngarrindjeri Nation 2006). This area is a vital Ngarrindjeri creation place and a habitat and breeding ground for many Ngarrindjeri ngartji (totems—friends). It is connected with Creation Ancestors such as Ngurunderi that give Ngarrindjeri lawful responsibility to care for/as Country (Yarluwar-Ruwe).⁷ Ngarrindjeri understandings of risk to this interconnected body of water are based on Ngarrindjeri ways of being, knowledge systems and experience – they are incommensurate with western systems of knowledge, law, economy and politics. The opening quote from the NRA's submission to Federal government's MDB planning process is a poignant example of the ongoing attempts of Ngarrindjeri leaders to explain their unique understandings of the importance of the 'lands, waters and all living things' to non-Indigenous authorities.

In times of global warming, and the over-use of finite water resources, the Ngarrindjeri Nation is working towards a secure future for Ngarrindjeri Yarluwar-Ruwe (Sea Country - lands, waters, spirit and all living things) (Ngarrindjeri Nation 2006) (see Figures 1 and 2; and Appendices 7, 8). This ecological work of Indigenous nation (re)building requires a significant improvement in the relationship between the Ngarrindjeri nation and the Australian settler-state.⁸ In an Australia without treaties, for Indigenous nations ecological restoration is always a matter of justice and self-determination. For Ngarrindjeri, the largest source of risk to the health of Ngarrindjeri Yarluwar-Ruwe

remains a fragile and subservient relationship with settler-state authorities, and the subsequent lack of Ngarrindjeri authority in decision-making processes that fundamentally impact Ngarrindjeri lives (see Ngarrindjeri Nation 2006; Trevorrow et al. 2010; Birckhead et al. 2011; Hemming et al. 2011; Howitt et al. 2012; Hemming et al. 2019; Howitt 2019).⁹ This continuing risk was confirmed by this project during workshops that featured a Ngarrindjeri assessment of risks to connected water sources in the MDB region (see Figure 4).

Ngarrindjeri strategies of engagement with non-Indigenous interests have long-centred around identifying risks to Ngarrindjeri Yarluwar-Ruwe, developing ways of minimising these risks and creating ways to transform them into opportunities (see Ngarrindjeri Nation 2006; Bell 2008; Hemming and Rigney 2008; DEWNR and NRA 2016). A key contemporary challenge for Ngarrindjeri engagement with non-Indigenous Natural Resource Management (NRM) is to ensure that crucial features of Ngarrindjeri nationhood such as Ruwe/Ruwar (the interconnection between Country, body, spirit and all living things), are understood, valued and central to NRM policy, plans and programs.

1.2 The Murray Darling Basin Plan and new opportunities

First Nations in Australia have long argued for government NRM and water management to recognise unique Indigenous rights and responsibilities to water (see Morgan et al. 2006). Comparatively recent changes to MDB policies and laws have created a requirement for state governments to improve engagement with First Nations. Under Chapter 10, Part 14 of the Commonwealth Murray-Darling *Basin Plan* (2012), South Australia is required to meaningfully engage 'Aboriginal' nations in the development of new regional water resource plans. This includes identifying Indigenous nation's objectives related to the management of water resources and a requirement to 'have regard' for Indigenous cultural values and uses. Basin states have used standard risk assessments to underpin the development of the new Water Resource Plans. South Australia, like other Basin states, utilised risk assessment processes that were unable to effectively assess risks to Indigenous values and uses, 'arising from the use and management of the water resources of the water resource plan area' (see *Basin Plan* 2012, p. 10.53 (f)). This was, and to a large extent still is, a significant policy gap for all Basin states and a primary target for this research project.

In 2015 the Ngarrindjeri Regional Authority (NRA) and the SA Department for Environment, Water and Natural Resources (DEWNR, now the Department for Environment and Water - DEW) entered into a *Water Resource Planning Statement of Commitment* (2015) and an associated *Cultural Knowledge Agreement* (2015) (see Appendices 9 and 10). A key objective in the negotiation of these agreements was to provide DEW with an improved basis for addressing the requirements of the new *Basin Plan* (2012). A formal representative working group was established to support this engagement process. This Goyder Institute project is a specific outcome of this partnership and the ongoing work of the Water Resource Planning Statement of Commitment Working Group.¹⁰ These negotiated agreements were key outcomes of the award-winning Coorong Lower Lakes and Murray Mouth (CLLMM) Ngarrindjeri Partnerships Project (2012-2017) – a component of the South Australian government's *Murray Futures Program* designed to alleviate the impacts of the Millennium Drought (see DEWNR and NRA 2012; Hemming and Rigney 2016b; Mosley et al. 2019).

1.3 Translating Ngarrindjeri Yannarumi into water resource risk assessments

This Goyder Institute project entitled, ‘Translating Ngarrindjeri Yannarumi into water resource risk assessments’, was designed to continue the complex work of translation, negotiation, and articulation required to address current risks to Ngarrindjeri wellbeing emerging from mainstream water resource management (see Hemming and Rigney 2014, 2016).¹¹ It continues the political, educative, intellectual and transformative work of earlier projects (see Plate 1). This report documents the development of tools and frameworks for translating and representing Indigenous interests in water resource planning risk assessment. As a collaborative, multi-disciplinary and embedded research project, the team included: Ngarrindjeri researchers; government specialists in water planning risk assessment and broader NRM; and university-based academics. It relied on established partnerships and agreements between the Ngarrindjeri Nation, the university sector and the South Australian Department for Environment and Water (DEW)¹²; and decades of Ngarrindjeri efforts to negotiate a just relationship with the settler-state in the arena of NRM (see Hemming et al. 2016) (see Appendices 5, 6, and 10).

The project addressed a significant deficiency in the process of government water planning to understand and identify risks to Indigenous interests and values. It did this by developing a methodology to meaningfully and respectfully connect Indigenous risk assessment and mainstream water resource planning risk assessment. This meant prioritising the security of Indigenous agency and expertise in this engagement with water planning. More broadly, this project targeted a perennial tendency in Australian government planning to generically position engagement with Indigenous people or First Nations as a problem or a risk.¹³ Transforming this risk averse relational discourse to one of possibilities, healthy relationships and interconnected benefit has been key to the Ngarrindjeri project of securing wellbeing and life-giving flows for Yarlular-Ruwe. Importantly, from a Ngarrindjeri perspective, the project has also contributed to the preparation of South Australia’s NRM sector for a potential treaty relationship with First Nations, with the Ngarrindjeri Nation taking a lead in treaty negotiations with the South Australian Government (see Thomas 2017).¹⁴

Starting in 2002 Ngarrindjeri leaders began negotiating a series of contract law agreements with non-Indigenous government agencies that included: recognition of ‘traditional ownership’; the unique Ngarrindjeri responsibility for Speaking as Country; recognition of the Ngarrindjeri Regional Authority as the Nations’ peak body; and a firm commitment to a more equitable relationship between Ngarrindjeri and the state of South Australia (see Hemming et al. 2019). It became clear during this project that there was a gap in recognition that the negotiated agreements between Ngarrindjeri and the Crown in South Australia act as powerful, jointly developed, risk management ‘tools’ (see Hemming and Rigney 2016b). The secure foundations and principles for safe working relationships in complex NRM programs that these agreements provide has not been understood, and therefore, required further translation to ensure their incorporation into wider planning contexts. Government agencies tend to characterise the agreements as ‘cultural’ engagement protocols or negotiating agreements. Prior to this project, DEW’s water planning risk assessment processes did not draw upon these foundational risk management tools, even though the State Government reported them as a key part of South Australia’s Indigenous engagement framework in their new MDB Water Resource Plans (WRPs)(see DEW 2019, p. 124).¹⁵ This fundamental shift in government understanding of the significance of what has been categorised as Ngarrindjeri or ‘Aboriginal’ agreements has enabled,

through research and translation, a clearer articulation of the role and value of these foundational agreements to water planning risk assessment.

During a Ngarrindjeri Yannarumi risk assessment process, compliance with these positively oriented and relational risk management tools is a fundamental indicator that Ngarrindjeri values and interests are being taken into account (see Appendices 3, 5, 6, and 10). This project ensured that these 'risk management tools' articulate with water risk assessment, bringing the relationship principles committed to under KNYAs and other agreements into this crucial area of water planning. A key project outcome directly addressing this fundamental gap in understanding and articulation was the development and introduction of a new category of risk to 'First Nations' in water planning that specifically includes valuing the relationship between First Nations and the Australian settler-state.

2 Ngarrindjeri Yannarumi: establishing respectful relationships in water planning

Ngarrindjeri Vision for Country 2006

Our Lands, Our Waters, Our People, All Living Things are connected. We implore people to respect our Ruwe (Country) as it was created in the Kaldowinyeri (the Creation). We long for sparkling, clean waters, healthy land and people and all living things. We long for the Yarluwar-Ruwe (Sea Country) of our ancestors. Our vision is all people Caring, Sharing, Knowing and Respecting the lands, the waters and all living things.

(Ngarrindjeri Nation 2006, p. 5).

Ngarrindjeri Yannarumi Assessment – Speaking as Country

The NRA has recently made significant progress in developing the Ngarrindjeri Yannarumi Assessment. Yannarumi – meaning speaking as country – is a Ngarrindjeri process of decision making and assessment. This process has been adapted to enable the NRA to assess the lawfulness and life[-]giving elements of contemporary issues, including the health of Country according to Ngarrindjeri principles...

The Yannarumi Assessment will continue to be refined so as to provide the NRA with a culturally appropriate framework to develop and engage in programs, including Murray-Darling Basin Plan implementation and Ramsar Management Plan development.

(Excerpt from DEWNR and NRA 2016 *KNYA Taskforce Annual Report 2014-2015*, p. 2)

2.1 Introduction

The section provides a detailed contextual discussion of the centrality of Ngarrindjeri Nation (re)building methodologies as a key relational re-alignment ‘tool’ for transformations in both NRM and Yannarumi. In 2006, in the midst of the Millennium Drought, Ngarrindjeri Elders and leaders developed a public ‘Vision for Country’ as part of the first *Ngarrindjeri Nation Yarluwar-Ruwe Plan (Caring for Ngarrindjeri Sea Country and Culture)* – a constitutional document that provides a plan for the Ngarrindjeri Nation in pursuit of self-determination and a secure and healthy future (see Ngarrindjeri Nation 2006; Hemming and Rigney, 2008). A community appointed Ngarrindjeri governance working party led the development of the *Yarluwar-Ruwe Plan* with guidance and input from key elders.¹⁶ The plan was endorsed at a Ngarrindjeri Nation meeting, and is formally recognised by the South Australian Government in regional policies and planning.¹⁷ The Ngarrindjeri ‘Vision for Country’ and related goals informed the historic Kungun Ngarrindjeri Yunnan Agreement (KNYA)

('listen to Ngarrindjeri people talking'), which was negotiated in 2009 by Ngarrindjeri leaders and the State of South Australia (see KNYA 2009; Hemming and Rigney 2010; Hemming et al. 2011; Rigney et al. 2015). An inter-governmental taskforce focusing on 'Country' related issues was established to enact the KNYA commitments. The inaugural *KNYA Taskforce Annual Report (2010-2011)* begins with the following acknowledgement of the Ngarrindjeri as traditional owners of Ngarrindjeri lands and waters:

The South Australian Government acknowledges Ngarrindjeri are the Traditional Owners of the land and that according to their traditions, customs and spiritual beliefs its lands and waters remain their traditional country. The State also acknowledges and respects the rights, interests and obligations of Ngarrindjeri to speak and care for their traditional country, lands and waters in accordance with their laws, customs, beliefs and traditions.

(DEWNR and NRA 2012b p. 2)

These new relationships and strategies are fundamental to sustained Ngarrindjeri resistance and strategic transformation and since the mid-1990s have led to the development of a new peak governance body, the Ngarrindjeri Regional Authority (NRA), which was established in 2007. Crucial in the Ngarrindjeri choice of pathways is an acute awareness of the 'cunning of recognition' embedded in the state's existing processes for 'protecting' Aboriginal heritage, managing natural resources and legally recognising native title claims (see Povinelli 2002; Hemming and Rigney 2010). By this we are referring to the debilitating authenticity tests contained in legislative forms of protection or recognition of Indigenous 'rights' in Australia. For Ngarrindjeri to identify, organise and act as a sovereign First Nation it requires a theorisation of contemporary forms of South Australian settler-colonialism, the identification of their genealogies and a clear understanding of the 'actor-networks' or 'assemblages' that reinforce colonising relations of power (see Deleuze and Guattari 1987; Smith 1999; Latour 2005; Wolfe 2006; Hemming 2007; Bignall 2010; Byrd 2011; Cornell 2015).

Ngarrindjeri agreement-making strategies, for example, resist the paternalism and 'Aboriginalism' of Australian forms of protection and recognition, beginning with a requirement that non-Indigenous parties to KNYAs recognise the Ngarrindjeri Nation as the 'traditional owners' of Ngarrindjeri lands and waters (see Attwood and Arnold 1992). This recognition is required as the foundation of a new respectful and collaborative relationship between Ngarrindjeri as an Indigenous First Nation and external parties such as the Australian settler-state. Ngarrindjeri are proud that the only treaty they have signed is with other indigenous nations, as parties to the treaty forming the United League of Indigenous Nations.¹⁸

This strategy is built on the essential, fundamental interconnection between Ngarrindjeri, the lands, waters and all living things. It emerges from a holistic approach to 'Caring as/for Country' that resists western constructions of natural and cultural resource management as separate domains and insists that Caring as Country is a sovereign expression of Ngarrindjeri lawful responsibility and contemporary nation (re)building (see Bignall et al. 2016; Hemming et al. 2016). In pursuit of increased understanding and materialisation of what can be 'translated' as Ngarrindjeri 'ethico-onto-epistemology', the NRA negotiated a 'posthuman' legal recognition through a 'Speaking as Country Deed' with the South Australian government (see Barad 2003; Braidotti 2013; Ngarrindjeri Speaking as Country Deed 2014) (Appendix 5). This Deed further operationalises the Ngarrindjeri philosophy of being in local and national management plans 'governing' the Lower Murray region. Speaking lawfully as Country (Yannarumi) is a sovereign act of identification and a form of 'expressivist philosophy' that materialises

the fundamental interconnections between people, nation and Country. Yannarumi foregrounds Ngarrindjeri authority and decision-making practices (see Bignall et al. 2016).

2.2 First Nation (re)building: creating Murray Futures through regulating flows

In recent years the concept and practice of Ngarrindjeri Yannarumi (Speaking lawfully as Country) has become an active translation device, bringing Ngarrindjeri philosophy, knowing in being, and Nation objectives into relationship with non-Indigenous interactions with Ngarrindjeri Yarluwar-Ruwe (see Hemming et al. 2016; Bignall, Hemming and Rigney 2016; Rigney et al. 2018). In translating and connecting, Yannarumi identifies the characteristics of relations with Ngarrindjeri Yarluwar-Ruwe, identifying areas where changes to flows are required. The form of political negotiation and public pedagogy required here is First Nation centred, posthuman, critical, and decolonial.

Ngarrindjeri leaders and their supporters have attempted to ‘weave’ emerging ‘contact zone’ relations with experienced understandings of existing actor-networks and a desire to create new assemblages that interrupt the recycled colonial archive in Cultural Heritage Management (CHM) and NRM management (see Latour 2005; Hemming and Rigney 2008, 2010). These creative, political, legal and pedagogical acts are consciously designed to produce health-giving relations in the contemporary bureau-political setting. Hopefully fostering a healthy and constructive relationship between Ngarrindjeri and non-Indigenous government at all levels. Since colonisation began, Ngarrindjeri leaders have longed for wellbeing (*parpun miwi*), seeking healthy/reproductive/spiritual (*katjeri*) relations between the lands, waters and all living things (see Hemming et al. 2017). These strategies and techniques are developed from hard lessons learned in generational conflicts with the settler-state and through intellectual partnerships with Indigenous and non-Indigenous scholars and advisors. Furthermore, Ngarrindjeri seek a fundamental shift in their relationship with the settler-state from a colonised, consulted ‘stakeholder’ to a knowledgeable, active, sovereign, First Nation partner.

The term Murray Futures is borrowed from the South Australian Government’s *Murray Futures Program* which was designed to alleviate the impacts of the Murray-Darling Basin’s Millennium Drought (see DEWNR and NRA 2012; Hemming and Rigney 2016). Initial program planning followed the usual teleological path of erasure of Ngarrindjeri as part of the living body of Murrundi (River Murray). In 2009, via KNY agreement, Ngarrindjeri negotiated an historic, long-term, multi-million dollar program as part of the South Australian Government’s bid for federal funding under the *Water for the Future* initiative (Hemming and Rigney 2012).¹⁹ Challenging Federal and State Government policy settings, Ngarrindjeri argued that Indigenous ‘Caring as/for Country’ should be an essential part of any NRM program. Furthermore, the Ngarrindjeri position asserted that social justice and Indigenous nation (re)building, fundamentally a political program, must value the objectives of the Ngarrindjeri component of the state’s business case and framing document, *Securing the future: A long-term plan for the Coorong, Lower Lakes and Murray Mouth* (DEH 2010). The proposition of Ngarrindjeri was that healthy and active Ngarrindjeri and respectful relations would support healthier lands and waters. In 2012 Ngarrindjeri Regional Authority (NRA) Chair, Tom Trevorrow welcomed the Coorong, Lower Lakes and Murray Mouth Ngarrindjeri Partnerships Project (CLLMM NPP 2012-2016) as a collaborative act of healing. In the following excerpt from a ministerial media release he

incorporated Ngarrindjeri philosophy and nation re-building aspirations, paving the way for future 'treaty' negotiations:

To care for country is to care for one's future and the future of our children. The Murray Futures program provides an opportunity to establish a lasting legacy and positive collaboration between the Ngarrindjeri Nation and the people of South Australia. The Ngarrindjeri Regional Authority has worked well with Government to develop this Partnership Project which will help heal the lands and waters and all living things.

(Trevorrow in Caica 2012)

The 2009 whole-of-government KNYA is a clear example of a commitment to a new relationship and includes the following 'de-colonial' acknowledgement by the South Australian Government:

The Ministers acknowledge [representing the Crown in Right of the State of South Australia] that the Ngarrindjeri are the Traditional Owners of the Land and that according to their traditions, customs and spiritual beliefs its lands and waters remain their traditional country.

(KNYA 2009)

This acknowledgement marked a historic recognition of Ngarrindjeri as a 'society' – a First Nation. It also marked a fundamental political and conceptual relocation of Ngarrindjeri from the fringe-camps at the margins of the settler-state, forever under the 'care' of the new 'Protectors of Aborigines', or identified as one of the assimilated, non-descript 'Aboriginal stake-holders' to be consulted, but never the author, the expert, or the authority (see Hemming and Rigney 2010). To borrow from philosopher Donna Haraway (2006), the established power relations and dominant philosophies of the contact zone became 'troubled', as the restricted flows of fresh water in the MDB became unsustainable for non-Indigenous, Ngarrindjeri and all living things (Haraway 2016). The river's seasonal flows, droughts, interrupted health, and floods reminded those that live in the Basin of the shifting material basis of wellbeing. There were signs of sickness everywhere (pukali – unhealthy) – sick people, exposed acid sulphate soils, dry lake beds and algal blooms. During the Millennium drought non-Indigenous farmers, fisherman, tourists, and local politicians related more closely to Ngarrindjeri speaking as Country and showed signs of understanding that: 'The lands and waters is a living body. We the Ngarrindjeri people are part of its existence. The lands and waters must be healthy for the Ngarrindjeri people to be healthy' (Trevorrow in Hemming, Trevorrow and Rigney 2002).

In her book *Staying with the Trouble: Making Kin in the Chthulucene*, Haraway (2016, p. 30) asks:

What happens when human exceptionalism and bounded individualism, those old saws of Western philosophy and political economics, become unthinkable in the best sciences, whether natural or social? Seriously unthinkable in the best sciences, whether natural or social?

Ngarrindjeri as a living body, an Indigenous nation, knowing in being, has suffered under these philosophies of colonialism and is in a state of 'longing for wellbeing' – *parpun miwi* (see Plumwood 1993; Rose 2004; Weir 2009; Hemming et al. 2016, p. 46). As indigenous scholars Kyle Powys Whyte (Potawatomi), Chris Caldwell (Menominee), and Marie Schaefer (Odawa) write:

Waves of settlement seek to incise their own ecologies required for their societies to survive and flourish in the landscapes they seek to occupy permanently. In settlement, the territories were already inscribed with

Indigenous ecologies that result from Indigenous practices of survival and flourishing.

The Indigenous ecologies *physically manifest* Indigenous governance systems through origin, religious, and cultural narratives, ways of life, political structures, and economies.

(Whyte, Caldwell and Schaefer 2018, pp. 157-158)

Along with nation (re)building work, ‘physically’ manifested in new forms of governance such as the NRA, ‘Ngarrindjeri have been able to have a positive and transforming effect upon the colonial policy regime affecting their Country, because land care is an essential part of the social enterprise of Ngarrindjeri Nationhood’ (Bignall et al. 2016, p. 473).

2.3 Translating Yannarumi into water resource risk assessment

Yannarumi translates roughly to English as ‘acting or speaking lawfully as Country’. It is fundamentally connected to understandings of peaceful relations and wellbeing. Yannarumi conveys the Ngarrindjeri conceptualisation of existence as inextricably bound to the ecological conditions that provide, define and sustain life: Ngarrindjeri cannot be considered as separate from the interconnected lifeworld that is Ngarrindjeri Ruwe-Ruwar (lands, waters, body, spirit and all living things). Consequently, Ngarrindjeri experience the devastation or wellness of the ‘natural’ environment as an element of their cultural wellbeing as a people. Ngarrindjeri people have an abiding responsibility to sustain the ecological health of Country that defines their existence as such: “For Ngarrindjeri, ‘wise-use’ requires practicing a lawful, respectful, and reproductive life that respects the Creation Stories handed down from the Kaldowinyeri (Creation)” (Hemming and Rigney 2016). Yannarumi articulates the Ngarrindjeri responsibility to act and relate in a way that cares mindfully for the interconnected being of Ruwe-Ruwar, as was conferred at the beginning of time by creation ancestors, such as Ngurunderi (Hemming and Rigney 2012). By ‘speaking as Country’ – when land is conceived as an entity that is never separate from the autochthonous peoples with which it is connected – Ngarrindjeri act lawfully and authoritatively according to the principles of ecological interconnectivity that define their existential responsibility to live carefully in relation to their lands and waters. Yannarumi exercises the collective right and obligation of Ngarrindjeri to protect, preserve and foster all of the life-forms that are sustained by their Country, including the cultural life of the community itself. Simultaneously, the relational perspective articulated in Yannarumi assists Ngarrindjeri to work through potential conflicts, misunderstandings and problematic engagements. Yannarumi therefore asserts the rightfulness of Ngarrindjeri ways of being and knowing, based on Ruwe-Ruwar as an Indigenous philosophy of relationality or interconnection.

Ngarrindjeri ‘Caring as Country’ is not predicated on a division between human and nature as subject and object. It is instead based on the intimate relationship between people, lands, waters and all living things, which form a system of reciprocal, interconnected benefit. Through Yannarumi, the Ngarrindjeri Nation is part of an international Indigenous movement towards understandings of ecology, science and governance that depart from western notions of the human as central, superior and exceptional to other life forms (see Cajete 2000; Johnson et al. 2015; Rigney et al. 2015; Whyte 2018). A non-humanist philosophy is embedded in contemporary Ngarrindjeri programs of NRM, CHM, water management and town planning. This approach is far from marginal in its public impact.

In 2014, a 'Speaking as Country Deed' was agreed between the South Australian Government and the Ngarrindjeri, recognising the broader significance of fundamental principles of Ngarrindjeri philosophy and committing partners to work together to promote a better understanding of these Indigenous values, knowledges and laws in the wider non-Indigenous community (see Appendix 5).

As a traditional Indigenous form of political ecology, Ngarrindjeri Yannarumi or Speaking as Country has a historical meaning, but is being reconceptualised in a contemporary form by Ngarrindjeri leaders to take into account the impacts and changes that have occurred to Ngarrindjeri Yarluwar-Ruwe (Sea-Country) as a result of colonisation. The continuity of Indigenous laws, values and traditions is strongly asserted in the *Ngarrindjeri Nation Yarluwar-Ruwe Plan*:

Our knowledge of Sea Country will continue to underpin our survival and our economy. Tendi, our formal governing council, ensured and will continue to ensure our stable and sustainable society, which maintains our obligations to Sea Country.

(Ngarrindjeri Nation 2006, p. 11).

When Ngarrindjeri meet to 'Speak as Country' about things that impact on the wellbeing of Ngarrindjeri Ruwe-Ruwar (lands, waters, body, spirit and all living things), judgements are made based on core cultural principles passed down through time. A governing group of leaders and elders is traditionally called the Tendi and when it meets, speaks and makes decisions this is known as Yannarumi or Speaking as Country. It is the responsibility of Ngarrindjeri leaders to make decisions that ensure the wellbeing of Ngarrindjeri Yarluwar-Ruwe. The Tendi has a formal position as part of the board of the contemporary national peak body, the Ngarrindjeri Regional Authority (NRA). The NRA Board is made up of representatives of Ngarrindjeri member organisations, key representative committees and elected representatives from the wider Ngarrindjeri Nation. The NRA takes responsibility for assessing whether something is healthy, lawful and creates wellbeing for the Ngarrindjeri Nation. This assessment of projects, practices, partnerships, plans and other activities is conducted with the relational wellbeing of Ngarrindjeri Ruwe-Ruwar as its objective. The NRA thus invests in a holistic approach that understands Ngarrindjeri as part of the living body of the lands and waters and all living things, with a cultural responsibility to 'Speak as Country'. Ngarrindjeri livelihoods, culture and wellbeing depend on exercising their cultural agency. With this in mind, the NRA has identified key goals that uphold Yannarumi as the expression of this cultural responsibility, and which aim to safeguard healthy Ruwe-Ruwar. The goals are: Strong Culture, Sovereign First Nationhood, a Secure Future, Healthy Country, Confident People, Creative Economy, a Respected History and Regional Leadership (see Appendix 8). These goals reflect and respond to Ngarrindjeri understandings about the interconnectivity between people and Country (Hemming and Rigney 2016: 34). With these overarching goals in mind, the NRA has developed a 'Yannarumi assessment framework', which it uses to evaluate the beneficial capacity (or the detrimental effects) of programs, policies and relations with non-Indigenous institutions including government, law, research, and education (see Appendix 3).

Consistent with the goals, a Yannarumi assessment involves an evaluation of the quality of connections evident in an ecological system, which for Ngarrindjeri were severely interrupted and diminished by the colonial separation of people from land and the imposition of exploitative agricultural technologies. Taking into account the continuing impacts of colonisation on Ngarrindjeri Yarluwar-Ruwe, Ngarrindjeri believe healing programs and healthy flows are encouraged by a set of criteria that support respectful intercultural engagement. These foreground respect for Ngarrindjeri knowledge, law, tradition and expertise; programs that increase the health of Yarluwar-Ruwe by

understanding and respecting the principle of interconnection; relationships that bring energy, health and wellbeing into Ngarrindjeri lives; engagements that build Ngarrindjeri capacity to Care for/Speak as Country to benefit lands, waters and all living things; and processes that build respectful relationships between Ngarrindjeri and other parties such as the State government (Hemming et al. 2017).

These elements are 'assessed' in relation to interconnected spiritual flows such as Kaldowinyeri, the life-giving process of creation; and parpun miwi, which relates to a yearning for wellbeing in the face of destructive forces of colonisation of Country and peoples. When Kaldowinyeri is respected, the interconnection of lands, waters, body, spirit and all living things expressed through Ruwe-Ruwar is pritji (strong) and katjeri (beautiful and healthy). The miwi spiritual connection of belonging with an environment is pritji (strong). Rupelli (Leaders) Yannarumi (speak as Country) and Ngiangiampe (relationships and governance) are strong through the effective action of Tendi Nguldun, (the Ngarrindjeri Nation's own healthy governance and agreement making structures). When creation is bountiful, Ngarrindjeri Yarluwar-Ruwe is katjeri, (beautiful and healthy). When, however, the reproductive flows of creation are inhibited, then parpum miwi, (the people and land), are hurt and depleted and long for wellbeing. The interconnectivity of Ruwe-Ruwar is interrupted and the feeling of balance is undermined, causing a sorrowful spirit, Wurreng-wulun. Colonisation inhibits Indigenous speaking and acting as Country. Colonial forces impede the healthy and culturally responsible management of an ecological system, and colonisation leads to blewiliun (unhealthy) and Wurangi (senseless and/or disrespectful) partnerships and relationships (Hemming et al. 2017).

For any particular context of action or experience, Yannarumi asks: what must be maintained or created, and should relationships be aligned, so that Ngarrindjeri can always be a living part of Country? In each engagement, Ngarrindjeri seek to remain responsible agents, and the engagement is therefore assessed primarily in terms of its respect for Ngarrindjeri agency, which is reflected chiefly in the capacity for Ngarrindjeri people to 'Speak as Country'. In many instances, non-Indigenous government representatives are now legally bound by contract law agreements to 'kungun Ngarrindjeri yunnan': to listen to Ngarrindjeri speaking of their experiences of unsuccessful colonial policies in the past, and their expectations for self-governance and a role in the management of Country in the future. The evaluative framework of Yannarumi further helps partners in a relationship to identify points of resonance and agreement. This provides a foundation for finding future accord, enabling a movement of general action to shift the Indigenous-colonial conflict in the direction of de-colonial partnership. Ngarrindjeri nationhood and self-governance begins from the claim that Ngarrindjeri people have never ceded sovereignty of Ngarrindjeri lands and waters, and thus remain sovereign. Through Yannarumi, Ngarrindjeri attempt to speak sovereignly, as their Country, in order to protect their environment and its interconnected life forms, including the cultural life of the Ngarrindjeri Nation. This relational sovereignty is extended in multiple spaces: physical, theoretical, social, environmental, educational and economic. Each of these spaces is at once a connector and a translator of the Yannarumi process, and a mode through which other connectors are translated and imparted. Accordingly, all agencies co-existing on Ngarrindjeri Country can be considered to share a sovereign responsibility to sustain the ecology of relationships that foster healthy life in this region. Furthermore, the sovereign capacity of each agent is relationally affected by the fact of their interactive co-existence. Yannarumi provides an ethos of mutual respect and care, needed to ensure both individual and systemic wellbeing and to realise a collective yearning for the conditions that safeguard the flourishing of life (see Bignall et al. 2016; Bignall and Rigney 2019).

3 Project background, approach and outcomes

3.1 Background

The project had its genesis in the later stages of the Coorong Lower Lakes and Murray Mouth (CLLMM) Ngarrindjeri Partnerships project as a consequence of collaborative project work conducted by the Ngarrindjeri Yarluwar-Ruwe team, and DEWNR's water planning risk assessment and Indigenous programs teams. This working relationship was critical to the development of the project proposal and the final composition of the research project team. The immediate background to the development of this project is detailed in Hemming and Rigney (2016). This report focussed on Ngarrindjeri-led contributions to the re-drafting of an Ecological Character Description (ECD) for the Coorong, and Lakes Alexandrina and Albert wetland Ramsar site. In this project, Ngarrindjeri applied a Yannerumi methodology to assess the wellbeing of Ngarrindjeri Country (the Ramsar site) and used this approach to contribute to a substantial change to the existing ECD (see Hemming et al. 2019) (see Appendix 3).²⁰

In the context of the Ramsar site, co-developed planning and policy was supported by a concurrent Goyder Institute research project designed to document and theorise the methodologies, strategies and negotiations (Hemming and Rigney 2016). It was important that the innovations developed in the CLLMM Ramsar/ECD project were recognised as emerging from Indigenous research. By this time Yannerumi had become an established Ngarrindjeri engagement methodology in South Australian NRM (and other sectors) and was a key element in Ngarrindjeri and DEWNR's 2015 Australian Riverprize. Ngarrindjeri learned from engagement in the CLLMM Ramsar/ECD project that the characteristics and values of Ngarrindjeri Yarluwar-Ruwe were defined by western science and other non-Indigenous interests. This ecological and extractive definition becomes the basis for subsequent government risk assessments governing future project planning and management decisions. What also became clear to the Ngarrindjeri team was the importance of water planning risk assessment to all regional NRM policy and planning. This foundational planning mechanism was largely invisible to First Nations in South Australia due to the structural gaps in DEWNR's risk assessment framework.²¹

3.2 Approach

3.2.1 LEGAL AND ETHICAL ENGAGEMENT FRAMEWORK

The following discussion provides a brief overview of the legal, ethical and relational framework underpinning this project (see Hemming et al. 2010; Hemming et al. 2016). This project was a collaborative and embedded research project with representation from the Ngarrindjeri Nation, the university sector and the South Australian Government. The project utilised formal relational agreements and co-developed research priorities developed over an extended period. These agreements and relevant planning documents are included as Appendices in this report. They reflect a new more respectful relationship between the Ngarrindjeri Nation and the South Australian Government. They also recognise and value the unique relationship and responsibility that

Ngarrindjeri have as part of Ngarrindjeri Yarluwar-Ruwe. Furthermore, the KNYA provided a Nation-to-Nation relationship between the South Australian Government and the Ngarrindjeri Nation.

Importantly for this project, the KNYA was a key part of DEW's reporting of Indigenous engagement mechanisms in water planning in response to the requirements of the new Commonwealth Murray-Darling *Basin Plan 2012* (see DEW 2019). For example, the 2014 *KNYA Taskforce strategic implementation plan* (2014c) included a water planning goal that set the basis for a Ngarrindjeri/DEWNR response to the requirements of the *Basin Plan 2012*. In mid-2013, a joint working party was established to begin developing a Statement of Commitment (SOC) to frame Ngarrindjeri engagement in water planning. This SOC was finalised and signed in 2015, committing the parties to a series of principles, objectives and processes (Appendix 9). This SOC recognises and supports the NRA's commitment to Indigenous nation (re) building and locates Ngarrindjeri philosophies and understandings of 'being' at the centre of input into South Australian water planning processes. The Water Planning SOC was the key project reference group and reporting mechanism to the NRA, the Ngarrindjeri Aboriginal Corporation (NAC) and DEW. Importantly, the NRA negotiated a contract law 'Cultural Knowledge Agreement – Water Planning' to ensure that Ngarrindjeri cultural knowledge remains Ngarrindjeri property and was valued and respected (Appendix 10).²² This agreement covers the Ngarrindjeri cultural knowledge contained in this report.

3.2.2 RESEARCH METHODOLOGIES

In 2006, Ngarrindjeri elders and leaders developed the Ngarrindjeri Nation's foundational planning document the *Ngarrindjeri Nation Yarluwar-Ruwe (Sea Country) Plan* (Ngarrindjeri Nation 2006). It makes plain ongoing Ngarrindjeri traditions, values and aspirations associated with Ngarrindjeri lands and waters. It is an example of Ngarrindjeri Yannarumi (Speaking Lawfully as Country), carrying with it Ngarrindjeri law, an Ngarrindjeri assessment of what constitutes wellbeing, and an identification of what has to change to achieve this vision. This section of the report briefly traces the theoretical and methodological trajectories towards the Ngarrindjeri co-management of Yarluwar-Ruwe envisioned in 2006. These trajectories were continued in the re-drafting of the Coorong and Lakes Ramsar ECD and have been further applied to water planning risk assessment in this Yannarumi project. A Yannarumi assessment or research methodology is an assessment of the characteristics and impacts of colonising processes and practices (see Appendix 3). It is a risk assessment and translation tool for identifying problems, gaps, injustices and synergies, and supports the development of effective responses and partnerships (see Hemming et al. 2019). This weaving together of partnerships and knowledge is characteristic of Ngarrindjeri agency in regional NRM, and in Ngarrindjeri research methodologies, it aligns with Indigenous standpoint theory in securing and communicating Indigenous conceptualisations of Country (see Nakata 2007; Moreton-Robinson 2004; Johnson et al. 2016; Hemming et al. 2019). Ngarrindjeri use the weaving metaphor to represent the concept of Ruwe/Ruwar and the responsibilities that centre Ngarrindjeri reproduction and wellbeing. As Ngarrindjeri elder Ellen Trevorrow (Ngarrindjeri Nation 2006, p. 51) writes: 'Stitch by stitch, circle by circle, weaving is like the creation of life, all things are connected'.

As Hemming and Rigney (2016), argued, the increasing challenges of sustainability have prompted an important shift within western environmentalism towards 'posthumanism' (see Latour 2004; Barad 2007; Weir 2009; Braidotti 2013; Braidotti and Bignall 2019). For example, Felix Guattari, influential French 'post-humanist' philosopher, posed questions to generate thinking about new futures where

responsibility for wellbeing brings with it a more ethical and accountable relationship between people, lands, waters and all living things (Guattari 2000). This vision for 'human'/'non-human' life resonates with Ngarrindjeri strategies for engaging with NRM and other interventions in Ngarrindjeri Country. It can be argued that posthumanist objectives, such as Guattari's, share common ground with indigenous 'de-colonising' projects or in the Ngarrindjeri context nation (re)building (see Smith 1999; Rigney and Hemming 2014; Rigney et al. 2015; Bignall et al. 2016; Bignall and Rigney 2019).

Whilst this conceptual framework shares many features in common with what might be understood as Indigenous 'ethico-onto-epistemologies' (see Barad 2007, p. 90), it typically fails to acknowledge Indigenous knowledges as a prior and continuing form of this 'new' paradigm. What is otherwise a promising development in environmental theory also has the potential to continue a long colonial tradition of the non-recognition of Indigenous philosophies, agency and authority. As these conceptual innovations make an appearance in Australian NRM they will need to take into account indigenous critiques of posthumanism and associated calls for a more sophisticated system of valuing of 'ecosystems services' and engaging with Indigenous conceptualisations of Country (see Weir 2009; Sullivan 2010; Birkhead et al. 2011; Hoffmann et al. 2012; Byrd 2011; Hill et al. 2013; Howitt et al. 2013; Coombes et al. 2014; Winthrop 2014; Ens et al. 2015; Jackson and Palmer 2015; Tadaki et al. 2015; Pert et al. 2015; Hoogveen 2016; Ruru 2018; Whyte 2018).

With consideration of these disciplinary shifts, the additional work for First Nations, includes making visible the value of Indigenous philosophies, knowledges, and critical theories, and their strategic alliances with non-Indigenous 'philosophical, legal and cultural traditions'. These alliances can produce hopeful futures towards a postcolonial or 'ex-colonial' relationship between First Nations, the lands and waters and settler-states (see Byrd 2011; Bignall 2014). The development of DEW's *First Nations Engagement Guideline* and modified *Risk Management Framework for Water Planning and Management* is a consequence of these alliances and directly contributes to a more hopeful future.

The research methodology applied in this project, brought together insights from Ngarrindjeri/Indigenous theoretical frameworks, philosophies and political action. It included aspects of recent posthuman theory, such as actor network and assemblage theories, that address conceptualisations of constructivism, non-human agency and the interactivity of 'micropolitical' events and systemic processes (see Bignall et al. 2016; Hemming et al. 2016). This was a conscious response to the work of international Indigenous scholars such as Linda Tuhiwai Smith (1999), Jodi Byrd (2011), Audra Simpson (2014), Mark Rifkin (2015) and many others. Ngarrindjeri are involved in what could be characterised as a form of decolonisation that centres the project of self/nation definition in terms of 'Speaking as Country'. As part of the Ngarrindjeri Nation (re)building agenda and the reclamation of self-governing authority, Ngarrindjeri have actively pursued a program of Indigenous co-direction of scientific and social research that is conducted on Ngarrindjeri Country. This has resulted in an enrichment of conceptual and scientific understanding for both Indigenous and non-Indigenous participants, who have begun to develop a new understanding of where cross-cultural philosophical synergies lie and may be utilised for maximum mutual benefit, reflecting a belief that 'we will be stronger if our knowledge places are multiple' (see Kirby et al. 2011; Law 2011, p. 11; Hemming and Rigney 2013, 2014; Mosely et al. 2019).

3.2.3 NGARRINDJERI RUWE/RUWAR AND YANNARUMI (SPEAKING LAWFULLY AS COUNTRY)

Ngarrindjeri use the term Ruwe/Ruwar to describe the interconnectivity between land, waters, spirit and all living things. This fundamental spiritual connection is reliant on healthy lands and waters, and the maintenance of connectivity between the Coorong, Lower Lakes and Murray Mouth as created by Ngurunderi and other Creation Ancestors. This way of understanding life is reflected in the following Ngarrindjeri statement about the significance of the registered heritage site known as the 'Meeting of the Waters':

The Meeting of the Waters is a fundamental aspect of the Ngarrindjeri world where all things are connected, whether they are living, from the past and/or for future generations. The Meeting of the Waters makes manifest core concepts of Ngarrindjeri culture that bind land, body, spirit, and story in an integrated, interfunctional world. The principles that flow from this cultural system are based upon respect for story, country, the old people, elders and family. The pursuit of these principles is contingent upon maintaining a relationship with country. The violation of these respect principles is manifest through the destruction of Ngarrindjeri Yarluwar-Ruwe (a concept that embodies the connectedness and interfunctionality of their culture) and their effect upon the behaviours and survival of ngatji (the animals, birds and fish). According to these principles and contingent beliefs the 'environment' cannot be compartmentalised: the land is Ngarrindjeri and Ngarrindjeri are the land. All things are connected and interconnected. Ngarrindjeri philosophy is based on maintaining the integrity of the relationship between place and person. It is the responsibility of the living to maintain this continuity. The past is not and cannot be separated from the here and now or the future. To break connections between person and place is to violate Ngarrindjeri culture. The objective in undertaking activities upon Ngarrindjeri country should be to not cause violence to Ngarrindjeri culture.

(DEWNR 2013, p. 21)

The 'Meeting of the Waters' was registered in 2009 under the *Aboriginal Heritage Act 1988* (SA) and includes the waters and the bed of the lakes, river and estuary.

In 2014 the Ngarrindjeri Nation and the South Australian Government entered into an agreement known as the 'Ngarrindjeri Speaking as Country Deed' to facilitate a program of intervention to keep the Murray Mouth open and support the health of 'the Meeting of the Waters' (see Appendix 5). The following statements by Ngarrindjeri Rupelli (traditional leader), George Trevorrow (deceased) further illustrate the importance of the area:

That's what we're talking about when we call it the meeting of the waters. Those waters, once they start mixing, that is the spiritual waters of this area, and of the Ngarrindjeri. This is where the major connections happen. This is the breeding place for all the ngatji [totems], and everything that goes with the mixing of the water underneath the water, so it's very, very important to us spiritually, because those things, as I said, they are closer than a friend to you. They are nearly almost part of you. They speak to you, you speak to them, and this is the place where they all come to.

(Trevorrow in Bell 2014, p. 563).

Kumarangk (Hindmarsh Island), that area, is the central point for the Ngarrindjeri people... that's why our ngartjis are there. That's the homeland. That's their area....That area is to us, that's our creation area and that's why so many of our stories, of our beliefs and our culture and heritage all revolves from that area outward upon the land of the Ngarrindjeri. It's a rich environment. It supports all the birdlife. You know, you could see that for yourself when you go there but to us Ngarrindjeri people it's a spiritual environment.

(Trevorrow in Bell 2014, pp. 569-70).

Ngarrindjeri Yannarumi (Speaking as Country) is an expression of Ngarrindjeri rights and responsibilities as 'traditional owners' and is centred on the philosophy that all things are connected. The health of Ngarrindjeri people is thus inextricably linked to the health of Ngarrindjeri lands and waters. Yannarumi is the expression of Ngarrindjeri responsibility to care for, speak for and exercise cultural responsibility as Ruwe/Ruwar. It can be understood as a practice of reproductive interconnected benefit (see Hemming et al. 2019). The North American concept of environmental reproductive justice resonates with Ngarrindjeri Nation (re)building and Yannarumi assessments (see Hoover 2018; Hemming et al. 2019). The enactment of reproductive interconnected benefit can be understood as Speaking as Country (Yannarumi) – exercising the cultural responsibility for Ngarrindjeri to care for, speak for and exercise cultural responsibility as Ngarrindjeri Ruwe/Ruwar. If the flows between spirit, lands, waters, and all living things are not healthy and 'appropriate' then there will be unhealthy outcomes for Ngarrindjeri. The character of these flows, and the relationships that produce them, can be assessed and adjusted using a Yannarumi methodology enabling Ngarrindjeri leaders (and their non-Indigenous partners) to identify the changes that are needed to support a healthy Ngarrindjeri Nation (see Appendices 3, 7, 8 and 9).

The project team published an award-winning journal article, 'Indigenous nation building for environmental futures: *Murrundi* flows through Ngarrindjeri country', addressing the relevance and value of the Ngarrindjeri Yannarumi methodology to Indigenous nation (re)building and to water planning and management in the MDB (Hemming et al. 2019).²³ The following excerpt encapsulates the translation, assessment and relational characteristics of Yannarumi:

Fundamentally connected to understandings of peaceful relations and wellbeing, Yannarumi conveys the Ngarrindjeri conceptualisation of existence as bound to the ecological conditions that provide, define and sustain life: Ngarrindjeri cannot be considered as separate from the interconnected lifeworld that is Ngarrindjeri Ruwe-Ruwar (lands, waters, body, spirit and all living things). Consequently, Ngarrindjeri experience the devastation or wellness of the 'natural' environment as an element of cultural wellbeing as a First Nation. By 'speaking as Country' Ngarrindjeri act lawfully and authoritatively according to the principles of ecological interconnectivity that define an existential obligation to live carefully in relation to the lands and waters. Yannarumi exercises the collective right and duty of Ngarrindjeri to protect, preserve and foster all of the lifeforms that Country sustains, including the cultural life of the community itself. Yannarumi therefore asserts the rightfulness of Ngarrindjeri ways of being and knowing, based on Ruwe-Ruwar as an Indigenous philosophy of relationality or interconnection (see Bignall, Hemming, and Rigney 2016; Hemming and Rigney 2016).

This rightful relationship between healthy people, healthy spirit and healthy environment is interdependent and mutually reinforcing. A strong, confident Indigenous nation with a secure decision-making authority can more effectively ‘speak as Country’ to determine better governance of water and wider environmental policy; and a thriving and sustaining riverine ecology will in turn support the cultural, spiritual, social and economic health of the Indigenous Nation that has grown with it since time immemorial.

The Ngarrindjeri Nation therefore acts on the principle that water allocations and river flows needed for the cultural, spiritual, social and economic health of Indigenous Nations should be decided and controlled by the governing authority of those Indigenous Nations, albeit now necessarily working in collaboration with the other governments and governing agencies that operate on Indigenous lands following colonisation. Indigenous water rights therefore should not simply be ‘reflected’ in water policy that is produced, delivered and overseen by a predominantly non-Indigenous planning body. Instead, the concept of Indigenous water rights embedded in the notion of cultural flows should direct the formation of water policy from a starting point of Indigenous sovereignty, with Indigenous governments adequately resourced to participate equitably in environmental co-governance.

Through Yannarumi, the Ngarrindjeri Nation is leading transformations towards new understandings of ecology, science and governance that depart from western notions of the human as central, superior and exceptional to other life forms (see Howitt 2019; Jackson 2018; Johnson et al. 2016; Whyte, Caldwell, and Schaefer 2018; Zanotti and Palomino-Schalscha 2016).

The evaluative relational framework of Yannarumi indeed helps partners in a relationship to identify points of resonance and agreement, as well as points of disagreement that should not be erased coercively for the sake of an imposed ‘consensus’. This framework thereby provides a foundation for finding future accord, enabling a movement of general action to shift the Indigenous-colonial conflict in the direction of de-colonial partnership (see Bignall 2011). In a settler colonial context, Yannarumi therefore also conveys an understanding of the respectful kind of relational agency required for the peaceful negotiation of coexisting powers that may not necessarily have commensurate interests in an ecosystem, or compatible methods for natural resource management and the governance of interconnected lifeforms.

(Hemming et al. 2019, pp. 222-223)

It is important to emphasise that Ngarrindjeri leaders followed Yannarumi principles to negotiate the historic whole-of-government KNYA and the *Speaking as Country Deed* 2014 (Appendix 5). Both are critical agreements providing the political and ethical foundations for the project team’s collaborative approach to developing positive transformations in water planning and NRM.

3.2.4 PROJECT STAGES: CONDUCT AND ACTIVITIES

3.2.4.1 BACKGROUND

This project directly emerged from a series of projects and ongoing work designed to positively change the relationship between NRM and the Ngarrindjeri Nation. Broadly speaking, the Ngarrindjeri Yannarumi methodology provides a mechanism for translating Ngarrindjeri goals and interests into a form that is understandable to non-Indigenous policy makers and planners. Most importantly, it can be used to assess the impacts of non-Indigenous interventions into Ngarrindjeri lives.

The Yannarumi project methodology prioritised ‘two-way’ learning between DEW and Ngarrindjeri to investigate potential adaptation of DEW’s existing water risk assessment process, based on the AS/NZS ISO31000:2009 standard.²⁴ This risk assessment international standard was adapted for use in water planning by DEW (see DEWNR 2012). It is commonly used by the Australian Government and in the private sector. It is very much a western risk assessment methodology and its application requires critical assessment of its Eurocentric assumptions. The Ngarrindjeri team conducted an initial analysis of Australian Government use of International Standards in NRM as a baseline for project development. Ngarrindjeri wanted to know why First Nations were not effectively part of existing risk assessment processes that formed the foundation of government planning. As argued previously, a growing understanding of the significance of this gap was reinforced by emerging requirements for early First Nation engagement under the new *Basin Plan 2012*.

Two-way learning and co-development occurred through a series of workshops and regular project team meetings. The overarching *Cultural Knowledge Agreement – Water Planning* provided a safe context to share knowledge and experiences and to co-develop solutions and new methodologies.²⁵ Workshop participants were drawn from DEW, other state and Commonwealth agencies involved in water planning and management, the Ngarrindjeri Nation, the Goyder Institute, Ngarrindjeri Jawun partners and the university sector. In the first phase of the project, a methodology was developed and tested that supported the translation and connection of Ngarrindjeri Yannarumi assessments into water resource planning risk assessment. Bow-tie analysis involving the creation of a visual tool referred to as the bow-tie diagram is used by DEW water planners to aid in risk identification and analysis (see Figure 3). The DEW *Risk Management Framework for Water Planning and Management* (RMFWPM) (DEWNR 2012) makes the following point about the value of this ‘tool’:

Bow-tie diagrams are used to display risks with a range of possible causes and consequences and also identify current controls that are in place to prevent the risk. This type of analysis is particularly useful where defined ‘events’ can be recognised and has been promoted as the recommended tool for analysing emergency risk in Australia (Emergency Management Committee, 2009).

(DEWNR 2012, p. 31)

The project team decided that this method, along with workshops, meetings and comparative risk analysis (CRC) provided a suitable approach for creating an understandable connection with the Ngarrindjeri Yannarumi approach (see Appendix 2; Figures 3, 4, and 5).

Using Ngarrindjeri and non-Indigenous research methods and risk assessment methodologies, the project identified linkages between the two processes and developed a replicable methodology that protects and respects the integrity of Ngarrindjeri knowledge and expertise and further develops Ngarrindjeri translation and engagement mechanisms. This translation and connection produced

recommendations for changes to DEW’s *Water Planning Risk Assessment Framework* and the development of new *First Nations Engagement Guideline* (Appendix 6). It also ensured that the co-negotiated and developed agreements such as the KNYA 2009, the 2014 *Speaking as Country Deed* and the *Cultural Knowledge Agreement – Water Planning* are recognised as key risk management tools.

For example, the Deed and the KNYAs set out objectives assisting with the definition of the risk management context. Typically, the level of risk is determined according to likelihood and consequence, and in this context, consequence could be framed as deviation from the objectives of these agreements. The formal agreements can also be considered a form of a risk management framework. When risk is being analysed, the agreements can be identified as existing controls for risk that affect the level of risk depending on their implementation and effectiveness. The context setting phase of risk assessment was identified as critical to ensure the formal recognition of these agreements and other national and international treaties, protocols and commitments. Importantly, this highlighted the importance of identifying the relationship between First Nations and the Australian Government (at all levels) as a key ‘value’ in any risk assessment process. When undertaking the practical aspects of the risk management task, DEW’s risk management framework requires identification and characterisation of ‘stakeholders’. Identifying First Nations as valued partners, rather than ‘stakeholders’, fundamentally affects the whole risk management process, including agreement of risk criteria, identifying, analysing and evaluating risk, and the treatment of unacceptable risks. In the early phases of this project, the South Australian Government was formally discussing treaties with South Australian First Nations. This made the articulation of key government risk assessment processes with developing treaty relationships a high priority.²⁶

It was initially intended that the project would apply the new methodology to assess risks to Ngarrindjeri interests and values across South Australia’s three MDB Water Resource Plan areas. Unfortunately, due to delays in project initiation, the project outcomes were carried out after the MDB Water Resource Plans were submitted and accredited.²⁷ Instead, a trial of the new methodology was funded as an extension to the project and took the form of a Ngarrindjeri assessment of risks to connected water sources in the MDB region.

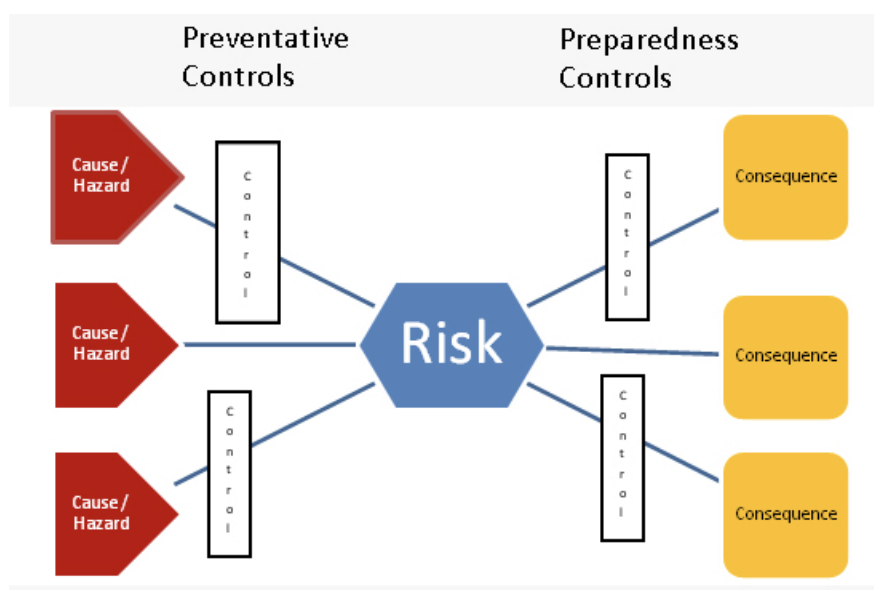


Figure 3. Example of a bow-tie diagram from DEWNR (2012).

3.2.4.2 Meetings, workshops and testing the new methodologies

Meetings

The project team met 11 times to: exchange information; plan workshops and presentations; jointly develop methodologies for connecting Ngarrindjeri Yannarumi to DEW's water risk assessment approach; and to prepare for testing the methodologies. Formal minutes of these meetings are maintained by DEW. The team included key DEW representatives (Hugh Wilson and Noelle Overdeest) involved in water planning, who were able to share up-to-date experience and knowledge of DEW's water risk assessment methodologies and make recommendations designed to most effectively adapt the existing DEW processes. DEW's Manager of First Nations Partnerships and Reconciliation, Lachlan Sutherland, provided broad connections across DEW's programs and extensive experience in working with Ngarrindjeri in NRM projects. Grant Rigney represented the Ngarrindjeri Regional Authority (NRA) and the Ngarrindjeri Aboriginal Corporation (NAC) on the project team. Daryle Rigney, along with another team member Grant Rigney are both Ngarrindjeri citizens and experts in NRM, water management and Indigenous nation (re)building. Steve Hemming and Amy Della-Sale were also team members as non-Indigenous researchers with long-term experience in working with the Ngarrindjeri Nation in major NRM and other programs. Team members attended joint NRA/DEW Water Resource Planning SOC Working Group meetings and reported project progress and emerging issues to this official working group (see Appendix 9).

Workshops

Workshops were a key mechanism to support the development of changes to DEW's water planning risk assessment to enable Indigenous values and uses to be taken into account. These workshops provided an opportunity for key DEW staff, experts from other agencies and Ngarrindjeri representatives, to share their approaches to risk assessment and to provide input into translation and connecting methodologies. The two workshops focussed on 'Two way sharing' and 'Testing/validating the draft translation methodology' (see Appendices 11 and 12 for agendas). Attendees were also contacted later to provide feedback on the effectiveness of the workshops. A key message from these responses was the value of the workshop as a learning experience, information sharing and in-depth discussion.

The first workshop, 'Two way sharing':

- introduced the project background and the purpose of the workshop;
- identified the Basin-wide policy gap in recognising Indigenous worldviews and interests in water resource risk assessment;
- explained and applied Ngarrindjeri Yannarumi risk assessment to specific case studies – Clayton Bay regulators, Ngarrindjeri Swan Egging, the Ngarrindjeri Nation Yarlular-Ruwe Plan, and the KNYA Taskforce and existing risk management 'tools';
- introduced DEW's water resource risk assessment and its application to the case study, the River Murray Water Resource Plan; and
- facilitated a broad discussion of translation opportunities and challenges which reflected upon the outcomes of the CLLMM projects as a basis for considering existing risk assessment approaches based on the ISO standard.

The workshop inspired detailed discussions from a significant group of experts (22 attendees). The discussion, questions and recommendations contributed to a review of DEW's risk management

framework for water planning and management. The following concluding summary was provided by Daryle Rigney as the workshop convenor:

- South Australia is a great place to show to the world what mechanisms and tools we are developing as an example of a progressive Indigenous nation.
- Other nation states under treaty are looking to the Ngarrindjeri model for examples of collaborative futures beyond treaty.
- The project can make a broader contribution for strategising the interventions that drive change.

The project team assessed the feedback from the first workshop and used it to further develop translation and connection methodologies. Team members worked from their various areas of expertise to co-develop recommendations for changes to DEW's *Water Planning Risk Assessment Framework* and to contribute to the development of DEW's *First Nations Engagement Guideline*. University-based members of the project team continued to conduct relevant literature searches to identify useful ideas from other contexts. The Ngarrindjeri Yannarumi methodology provided the foundations for the identification of required changes from an Indigenous perspective. These proposals set the basis for the key project outcomes and prepared the team for the second workshop to test the draft translation methodology.

The second workshop, 'Testing the draft translation methodology', was attended by DEW representatives and project team members. The workshop focussed on the DEW's *Risk Assessment Framework for Water Planning and Management* working through key elements of a risk assessment and the changes and adaptations that would bring Indigenous nations into the process. This discussion moved to a preliminary testing of the draft methodology on the management of connected water resources (from a Ngarrindjeri perspective applying the Yannarumi methodology). The workshop participants had significant expertise in water and NRM planning making the overall discussion extremely useful to the project team. Importantly, the opportunity to critically examine existing DEW processes and to make recommendations for policy change, addressed the pedagogical aims of the project and directly supported the process of potential policy change. The following is a summary of the recommendations arising from the workshop:

- Consider a review of risk assessment definitions to make them inclusive / remove potential barriers
- DEW and Landscape SA Boards need to budget resources to engage and support First Nations capacity to engage in risk assessment processes:
 - i. Gender, authority and governance considerations need to be taken into account
- Incorporate First Nations policy context, including:
 - i. Recognising the existence of Ngarrindjeri Yannarumi and different worldviews
 - ii. Considering agreements, protocols, recognition, rights and interests
 - iii. Recognising Native Title determination and rights
 - iv. A Map of Nation and determined areas for assessment team
- Maintaining a Country-based approach even where the geographical scope of the risk assessment does not align:
- Create equity in objective setting and space for First Nations objectives by:
 - i. Acknowledging the shared and different sets of objectives and interests

- ii. Make objectives visible and ensure they are part of the discussion, including discussing those that may not be consequential to the risk assessment at hand (without the objectives in full – all things connected)
 - iii. First Nations WRP objectives and or other objectives being identified during this stage
- First Nations preference for individual or group engagement process discussed and followed.
 - i. Group context setting and risk identification and analysis.
- Agreed principles identified:
 - i. For example, inequity between SA Government and First Nations discussed up front
- A restorative approach is required for a number of Ngarrindjeri objectives
- Process is not necessarily about improving or maintaining positions
- Existing exclusions from water rights and interests needs different approaches
- Bow-tie methodology expanded to show interconnections between consequences and objectives – improved visual and enable participants to better conceptualise.
- Embed these recommendations in DEW’s water planning policies and water resource management process.

Project team members provided a summation of the workshop discussions:

- A range of opportunities were identified
- The focus was on context setting, recognising what is in place and innovations, including:
 - i. First Nations objectives integrated
 - ii. Visually linking objectives into the bowtie – pathways
 - iii. Definitions and principles outlined
 - iv. Appropriate context setting enables planning to occur
- Established practice that First Nations interests are embedded in process
- New Guideline and policy should direct this for the risk assessment team
- Logistics in water resource and water allocation planning processes - link requirements to planning processes
- Next steps within Department
- Approach as a developing process – set of recommendations to create shift

Key project outcomes:

The outputs of these initial workshops were used by the project team to design potential changes to the DEW’s *Risk Management Framework for Water Planning and Management* to support better engagement with First Nations peoples. A draft *First Nations Engagement Guideline* was also developed to support DEW and First Nations in the complex process of engaging First Nations in water planning risk assessment.

Trialling recommendations in a specific risk assessment – Ngarrindjeri connected water resources in the SA Murray Region

An additional project activity included a focussed trial bringing the Ngarrindjeri Yannarumi methodology into a specific risk assessment (Ngarrindjeri connected water resources in the South Australian Murray Region). The trial consolidated the development of a translation and connecting methodology using the previously completed SA Murray Region Water Resource Plan (WRP) Risk Assessment as a baseline. It applied and tested the recommended changes to the existing DEW risk

assessment process described above. The recommended adaptations to the risk assessment framework provided the 'connecting methodology' between Ngarrindjeri Yannarumi and the risk assessment process by:

- expanding the context setting to consider legislative and policy settings relating to First Nations rights and First Nations interests.
- creating a new risk category in addition to the existing categories of 'Risk to the Resource' and 'Risk to Community Values' in DEW's Risk Assessment Framework.
 - This new category focussed on risks to First Nations Speaking as Country (including risks to First Nations; the relationship between First Nations and their Country; the relationship between the state and First Nations; and damaging or losing First Nations partnerships/ knowledge unique to Australia).²⁸
- Recognition that First Nation interests are also broad ranging and need to be taken into account in all categories of risk.

As such, the trial successfully consolidated the research project's objective of developing a translation and connecting methodology using the previously completed SA Murray Region Water Resource Plan, Risk Assessment as a baseline.

Two risk assessment workshops for the trail were held that brought together Ngarrindjeri Nation representatives (from the Ngarrindjeri Regional Authority and Ngarrindjeri Aboriginal Corporation) with project team members and the DEW's water planner responsible for overseeing a review of DEW's *Water Planning Risk Assessment Framework*. A further DEW water planner with some experience in First Nations engagement, but not part of the project team, was asked to utilise the project's policy recommendations to coordinate the risk assessment workshops. Ngarrindjeri were engaged in the workshops.

Each workshop extended over a half-day and the participants attended both workshops. The first workshop (18th November 2019) facilitated key decisions about the context, scale, timeframes (at least three generations) and the overall approach. The importance of the *Cultural Knowledge Agreement-Water Planning* was reiterated to set the basis for discussions and to ensure respect and protection for Ngarrindjeri knowledge. It was agreed that the Risk Register produced as an outcome of the workshops would be co-shared with the proviso that DEW ensured that Ngarrindjeri cultural ownership is understood and respected. The workshop objectives included in the workshop's 'Context setting notes' indicate the scope and approach taken during the risk assessment:

Why is a risk assessment needed? What are the objectives? [Establish the Context – Step 1 DEW Process]

- To test the preceding outputs from the project, including the engagement guidelines and suggested changes to the Risk Management Framework;
- create opportunities for learning for both DEW and Ngarrindjeri;
- Identify risks to Ngarrindjeri values and interests to support Ngarrindjeri assessment of these risks in any risk assessment process for water planning and management;
- support potential adaptation of DEW's processes and policies towards improved First Nations inclusion in planning and risk assessment;

- understand how the South Australian government values its relationships with First Nations peoples;
- adhere to State, National and International laws and commitments
- foster relationships between families and with Country;
- and, evaluate whether the revised risk assessment process provides for consideration of First Nations peoples' ways of being and their priorities, interests and goals.

The workshop discussion included the preliminary identification of risk sources, events and consequences (see DEWNR 2012 for the method). The inclusion of Ngarrindjeri Regional Authority goals and objectives was confirmed as being crucial to the risk assessment and this was now possible through the consideration of the new risk category. Ngarrindjeri terms for consequence levels/categories were also developed (Table 1). A smaller scale testing of the risk assessment methodology in preparation for the second workshop was undertaken for the *Management Plan for the South Australian Commercial Lakes and Coorong Fishery* (PIRSA 2016). This was used as an existing risk control mechanism and involved applying the proposed new category of risk to First Nations. The following insights were included in the workshop notes:

- Education of planners at the start, including package of information and Cultural Knowledge Agreement clause/procedure. Consider how to ensure this knowledge is retained and broadened out across DEW.
- Diversity of knowledge holders: there is work to do to fill in the gaps, not all people hold knowledge.
- Planners should understand that just because people do not speak about an issue, this does not mean they do not know, maybe they are not permitted to share.
- Connection with Ngartji [totem] critical as seen by Ngarrindjeri as family member – there is no separation between people and place.
- New principle 'Inclusive of First Nations peoples interests and worldviews'.
- Need to know where we are coming from – before we know where we are going. Work to do for some Ngarrindjeri to learn, find out about what leaders have put in place for them. There is need for resources to support First Nations specific cultural and nation-based education (civics).
- Past, present and future are all connected in unique ways for First Nations peoples – assessment needs to consider these – not just forward looking.
- There needs to be a focus on risk to things that are 'valued' not 'values' [Ngarrindjeri values are Ngarrindjeri cultural knowledge and law].
- Knowledge of the broader First Nations rights/International obligations was considered important for all DEW staff, not just water planners – having it as part of risk assessment [is] just another opportunity for it to become well-known.
- Risk Category elements: Risk to First Nations – families, nations and inter-nation relationships; Risks to relationship with government (at all levels) – not just state government.

The second workshop (9th December 2018) focussed on connected water sources in the South Australian River Murray region. The risk assessment workshop methodology and outcomes are reflected in the Ngarrindjeri bow-tie diagram and the table of consequence categories for connected water sources (Figures 4 and 5). The bow-tie diagram summarises the risk pathways between water resource management and Ngarrindjeri goals and objectives. The diagram provides a Ngarrindjeri

representation of the interconnections between: sources of risk; events characterised in Ngarrindjeri terms as 'flows'; consequences framed around the proposed new category of risk to First Nations; and their impacts on Ngarrindjeri goals, objectives and ways of being. It is important to note that from a Ngarrindjeri perspective these flows represent a complex relationship of potentially interconnected, reproductive benefit (Bignall, Hemming and Rigney 2016; Hemming and Rigney 2016; Hemming et al. 2019). From a Ngarrindjeri nation building perspective, the consequences of an active and a healthy Ngarrindjeri nation creates beneficial flows towards the agencies of the state. The mixing of these flows, channelled through respectful relations (such KNYAs or a treaty) has the potential to create healthy outcomes for the lands, waters, all people and all living things. The Ngarrindjeri consequence category 'positive impact' takes into account this conceptualisation of healthy flows and relationships producing beneficial consequences (Table 1). In this case the Ngarrindjeri consequence categories associated with 'positive impact' are Ngroi (pleased, disposed towards wellbeing) and Katjeri (beautiful, healthy, lawful, reproductive).

The Ngarrindjeri bow-tie diagram and the table of consequence categories integrate Ngarrindjeri cultural knowledge, apply a Ngarrindjeri Yannarumi assessment methodology and remain the property of the Ngarrindjeri nation. They are being shared to communicate and demonstrate the inclusion of a new category of risk in DEW's *Risk Management Framework: Risks to First Nations peoples*. Other First Nations may view risks to Country in different ways. The diagram/framework 'Recovering Ngarrindjeri wellbeing' provides an indication of how Ngarrindjeri represent the ongoing impacts of colonisation on Ngarrindjeri wellbeing (Appendix 7). These representations and assessments include key concepts such as: flow; relationship; responsibility; reproduction rather than production; and whiteness.

Recommended improvements to the risk assessment framework and engagement guideline were collated by the project team. Overall, the trial enabled a refinement of project recommendations, identified gaps and uncertainties and consolidation the primary research objective to develop a connecting methodology and processes to translate Ngarrindjeri Yannarumi into water risk assessment.

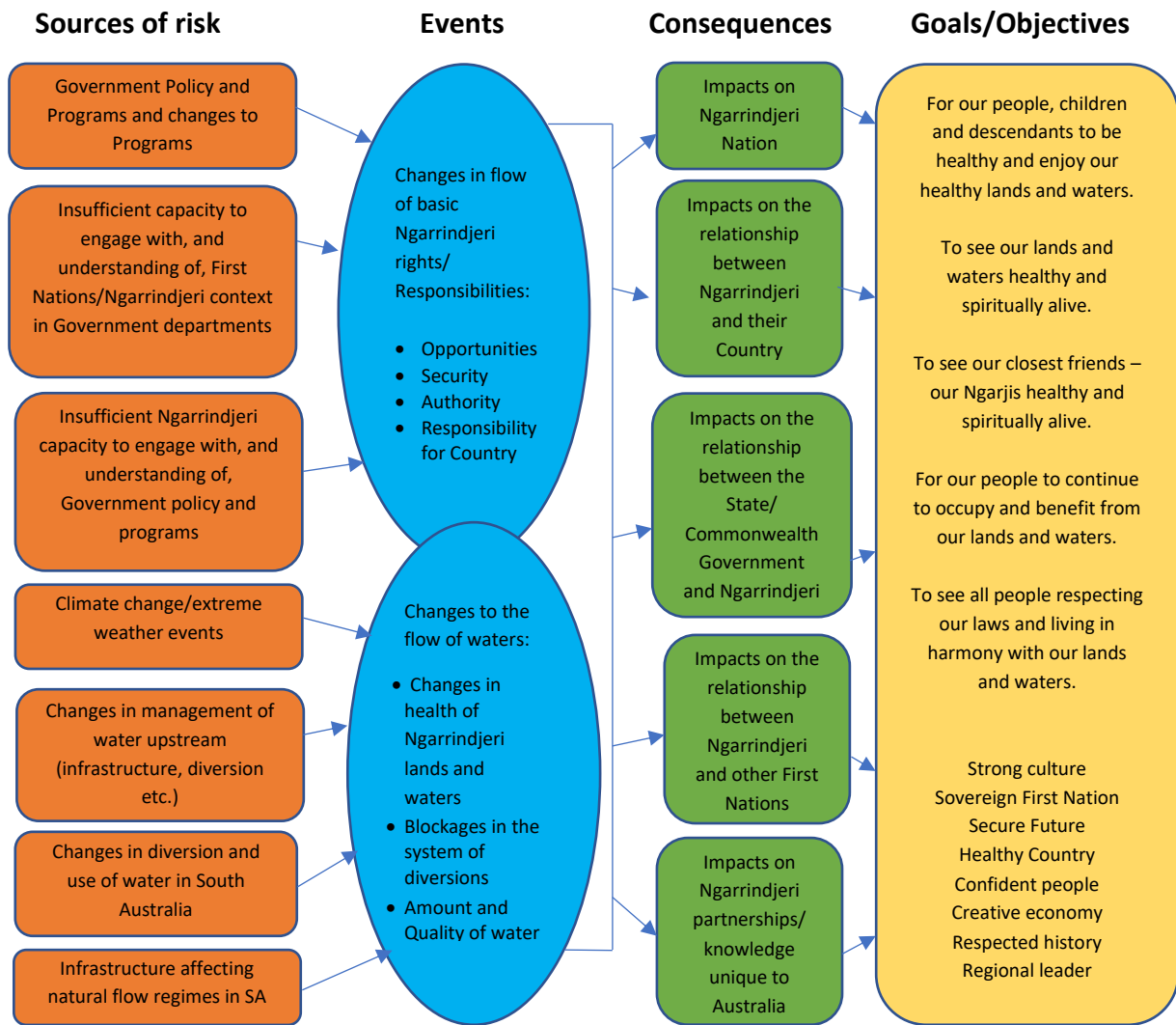


Diagram summarises an assessment of risks to Ngarrindjeri goals and objectives related to water resource management. The assessment was undertaken by Ngarrindjeri and the Department for Environment and Water (DEW) in late 2019 as part of the project Translating Ngarrindjeri Yannerumi into water resource risk assessment, a Goyder Institute for Water Research project conducted by the Ngarrindjeri Aboriginal Corporation, the University of Technology Sydney and DEW. The diagram integrates Ngarrindjeri cultural knowledge, applied a Yannerumi assessment methodology and remains the property of the Ngarrindjeri Nation. The diagram is being shared to communicate and demonstrate the inclusion of a new category of risk in the DEW Risk Management Framework: Risks to First Nations peoples. Other First nations may view risks to Country in different ways.

Figure 4. Bow-tie diagram for the assessment of risks to Ngarrindjeri objectives and outcomes related to water resource management.

Consequence category	Descriptor	**Ngarrindjeri consequence	Ngarrindjeri descriptor
Catastrophic	Water quantity and/or quality effects on connected water resources having catastrophic impact on the environmental and/or beneficial use values of that resource.	Meraldi	Un-living, dry, un-reproductive, still important
Major	Water quantity and/or quality effects on connected water resources having major impact on the environmental and/or beneficial use values of that resource.	Wurangi	Destructive, unlawful, disrespectful, uncaring, damaging
Moderate	Water quantity and/or quality effects on connected water resources having moderate impact on the environmental and/or beneficial use values of that resource.	Blewillin	Unhealthy, sick, damaged
Minor	Water quantity and/or quality effects on connected water resources having minor impact on the environmental and/or beneficial use values of that resource.	Pritji, Wurreng-wulun	Strong, sorrowful
Insignificant	Water quantity and/or quality effects on connected water resources having insignificant impact on the environmental and/or beneficial use values of that resource.		
Positive impact*		Ngroi	Pleased, disposed towards wellbeing
		Katjeri	Beautiful, healthy, lawful, reproductive

* For Ngarrindjeri risks involve opportunities and consequences can be positive and negative

** Ngarrindjeri consequence criteria do not necessarily align to DEW's categories and are being shared to communicate and demonstrate the inclusion of a new category of risk in the DEW Risk Management Framework: *Risks to First Nations peoples*. Other First Nations may view risks to Country in different ways and utilise different descriptors.

Table 1. Consequence categories for connected water sources – Ngarrindjeri Yannarumi project.

3.3 Summary of project outcomes

3.3.1 COMPLETED PROJECT ELEMENTS

Specific project outcomes include:

- **A literature review** – A review of national and international contexts regarding the integration of Indigenous knowledge, values and wellbeing into natural resources management risk assessments.
- **A workshop to share assessment processes** – For DEW staff to improve their understanding of the Ngarrindjeri Yannarumi assessment process and for Ngarrindjeri to improve their understanding of the DEW water risk assessment process. For DEW staff, Ngarrindjeri and researchers to better understand how these two processes can connect. The project team ran several workshops providing an opportunity for co-learning and the co-development of new methodologies and policy.
- **The development and testing of a translating mechanism** – Created a connecting methodology and process to translate Ngarrindjeri Yannarumi assessment into water resource risk assessment.²⁹ This connecting methodology is best summarised in the Ngarrindjeri bowtie diagram (Figure 4). This methodology produced recommended changes to the *DEW Risk Management Framework for Water Planning and Management* and a draft *First Nations Engagement Guideline*. These recommendations and new policy instruments have broader application value to the engagement of other First Nations in water planning risk assessment. A key policy change related to the inclusion of a new category of risk creating a space for First Nations to speak to – Risks to First Nations peoples, including the following sub-categories:
 - Risks to First Nations and their Country;
 - Risks to First Nations relationship with their Country;
 - Risks to relationships between First Nations;
 - Risks to First Nations relationships with government, including loss of partnerships and knowledge unique to Australia.
- **A Ngarrindjeri water resource risk assessment** - A Ngarrindjeri risk assessment of connected water sources in the River Murray region was completed. In particular, the assessment applied and incorporated the complex *translation methodology* that was developed to connect Ngarrindjeri Yannarumi to an assessment of the connected water sources in the River Murray region. The Ngarrindjeri bow-tie diagram provides the template the adapted bow-tie methodology. This process of translation and connection produced the new category of risks to First Nations peoples essential to creating the link to Ngarrindjeri nation's goals and objectives. Ngarrindjeri categories of risk (Table 1) were developed and applied to assessments of several specific sources of risk. The resulting Risk Register is held by DEW and is jointly Ngarrindjeri/DEW owned.

- **The adaptation of DEW’s risk assessment process** – The adapted water risk assessment methodology and process (based on the AS/NZS ISO31000) will better connect with First Nation health and wellbeing principles.

The project also builds on partnerships between DEW, the Ngarrindjeri Regional Authority and Flinders University through the Coorong, Lower Lakes and Murray Mouth (CLLMM) Ngarrindjeri Partnerships Project. This project has been informed by previous Goyder Institute research projects (partnerships between the Ngarrindjeri Regional Authority and Flinders University):

- *Indigenous engagement in environmental water planning, research and management: Innovations in South Australia’s Murray-Darling Basin Region* (Hemming and Rigney 2014)
- *Restoring Murray Futures: Incorporating Indigenous knowledge, values and interests into environmental water planning in the Coorong and Lakes Alexandrina and Albert Ramsar Wetland* (Hemming and Rigney 2016)

3.3.2 ADOPTION AND IMPACT IN DEW WATER PLANNING AND NRM

DEW is involved in the project. As an outcome of the project, DEW are currently undertaking a review of the DEW *Risk Management Framework for Water Planning and Management* based on eight years of implementation. The project’s recommendations to the Framework are being integrated into the review. The draft *First Nations Engagement Guideline* has been further developed and is currently undergoing internal and external DEW consultation. An endorsed Guideline was envisaged by June 2020.

3.3.3 SUMMARY OF BROADER PROJECT IMPACTS

The current project has had a number of broader project impacts, including:

- Strengthening South Australia’s water resource planning risk assessment processes by creating a potential mechanism for the incorporation of risks to First Nations peoples.
- Identifying of management strategies to minimise identified risks to First Nations peoples.
- Contributing to the increased capacity of South Australian water resource planning, and broader water planning, to consider the ‘quadruple bottom line’ (cultural, social, economic and environment aspects).
- Improving the alignment of South Australia’s planning approaches with International conventions such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP 2007).
- Further aligning water planning risk assessments with government commitments to respectful relations with First Nations peoples.

4 Comparison to international literature

4.1 United States of America and Canadian context

First Nation authors in the United States of America (USA) and Canada, and their non-Indigenous colleagues, have critiqued the quantitative risk assessment process used by government and industry since the 1990s (see Harris and Harper 1997; Wolfley 1997; Harris 2000; O'Neill 2000; 2003; Arquette et al. 2002; Cirone 2005; Nolan 2009; Donatuto et al. 2011; Holified 2011; 2012; Harper et al. 2012 and Arsenault et al. 2019). Central to these papers is the argument that ecological and human health risk assessment processes do not adequately reflect the culture, values and lifeways of First Nation people but instead use narrow expressions of what constitutes health and wellbeing by focussing on the physiological effects of risk (see Arquette et al. 2002; Donatuto et al. 2011; Donatuto et al. 2016). As a consequence, other sources of exposure and harm that may impact social and cultural ('intangible') aspects of health which are fundamentally linked to the health and wellbeing of Indigenous people are overlooked (Donatuto, et al. 2011). For example, conventional 'human' health risk assessments fail to account for the exposure patterns to contaminants experienced by First Nations people through their subsistence Tribal lifeways (O'Neill 2000; Donatuto, Satterfield and Gregory 2011; Hoover 2018). Researchers have argued that the failure to consider the unique context for First Nation peoples in risk assessments is a violation of their sovereign rights under treaties, agreements and statutory obligations (see Wolfey, 1997; O'Neill, 2000; Whyte 2018). Despite advances in some areas by non-Indigenous governments to integrate Indigenous health concerns and priorities into risk assessments (see Ranco et al. 2011; Arsenault 2019), there is still considerable work to be done around enacting changes to the western human risk assessment process in these contexts. In response, some First Nation researchers and their colleagues have developed models that articulate with existing processes (Harris 1998; Harris 2000; Harper et al. 2002; Harris and Harper 2011; Harper et al. 2012). Others have developed new models for First Nations to use in parallel with other risk assessment frameworks and inform new policy (see for example: Donatuto et al. 2011; Donatuto et al. 2016; Donatuto et al. 2019).

In brief, this substantial body of literature clearly illustrates that the methodologies, aims and goals of the Yannarumi project are not isolated, but part of a broader, long standing and ongoing agenda by First Nation peoples internationally.

4.2 Australian context

In Australia, there are limited published studies that discuss specific Indigenous led risk assessment models. There are, however, a number of examples involving input from Indigenous people into an existing risk assessment process lead by scientists (Robinson et al. 2014; Jackson et al. 2015; Carmichael 2017; Gollan et al. 2019). In one study, Indigenous knowledge supported a risk assessment of alternative flow scenarios in the Daly River region in the Northern Territory (Jackson et al. 2015). Ultimately, the Indigenous knowledge influenced western scientific understanding of the flow requirements for freshwater fish. This information was then used to inform conceptual models and the structure of quantitative risk assessment tools designed to understand the vulnerability of

particular fish to low flow. In this case the focus of this work was the integration of Indigenous knowledge by experts into existing western scientific risk assessment quantitative models rather than the development of a new model for the risk assessment process.

A recent study by Gaw et al. (2019), provides an overview of the current status of Indigenous engagement in environmental risk assessments. The study identified 76 priority scientific research questions to advance understanding of how environmental stressors impact environmental quality. It was found that mechanisms to integrate Indigenous knowledge and values into decision-making in this area were poorly formulated. The authors argued for regionally specific protocols developed collaboratively by scientists and engineers internationally to integrate Indigenous knowledge and values during the stage of identifying ecosystem protection goals within environmental risk assessments and management efforts more broadly (Gaw et al. 2019, p. 927).

In the discipline of disaster risk management, recent papers have highlighted that there are limited established consistent frameworks for undertaking risk assessments with Indigenous peoples (Spurway 2019; Thomassin et al. 2019). Spurway (2019) suggested that the lack of published risk assessment models may also be because risk assessment on 'Country' is generally part of the broader local and regional Indigenous land management practice. For example, approaches to NRM planning and management by some Indigenous groups in the Kimberley suggest that there may be processes in place to facilitate Indigenous led risk assessment models in land management contexts (Leonard et al. 2015; O'Fairchellaigh 2017; Austin et al. 2019; Poelina et al 2019).

In another study, Gollan et al. (2019) provided a synopsis of the process and results from a Threat and Risk Assessment (TARA) conducted by the Marine Estate Management Authority (MEMA) in the New South Wales. Essentially, it provides insight into the approach adopted by an Australian state government to a large scale regional environmental risk assessment that incorporated threats and risks to community social, cultural and economic values (MEMA 2015a, 2015b; BMT WBM (2017). The process involved some targeted Aboriginal engagement at various stages and included interviews to establish benefits and threats (five representative coastal Aboriginal groups) and 10 workshops around the draft TARA (Origin Communications 2017). A cultural technical group made up of Aboriginal MEMA representatives also reviewed feedback and submissions relating to Aboriginal identified risks before the final TARA report was developed. A literature review that identified Aboriginal benefits and threats in the NSW marine area was also used to 'inform' the draft TARA, alongside the data from the interviews and community survey (Feary 2015; Schnierer 2015).

In brief, this review provides further evidence that outcomes from this project have the potential to make a significant and innovative contribution to Australian NRM risk management.

4.3 Indigenous developed and led models

The two models outlined below and examples of Indigenous developed and led models. They were developed in response to the USA Environmental Protection Authority (EPA) risk assessment framework, which seeks to determine harmful impacts to the environment and human health resulting from exposure to contamination and other environmental stressors (See Cirone 2005; Johnson and Ranco 2011). Both Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Coastal Salish Swinomish tribal community have treaty relationships with the USA Government.

4.3.1 THE CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION SUBSISTENCE EXPOSURE TRIBAL SCENARIO METHODOLOGY

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) have developed a methodology that reviews and measures actual exposure scenarios experienced by tribal communities in response to environmental contamination. This tool, which is known as the ‘subsistence exposure tribal scenario’ methodology is used to support quantitative risk assessment processes undertaken on tribal lands by government agencies (Harris and Harper 1997, 2000, 2011; Harper and Harris 2000; Harper et al. 2002, 2012). The scenarios are developed using interviews and other ecological research, combined with information regarding contamination on tribal lands to estimate dose and risk to tribal communities. According to Harper et al. (2012), undertaking a proper risk assessment for future environmental remediation of tribal lands requires an ‘understanding of traditional patterns of natural resource use, and the translation of this understating into the conventional risk assessment format’. The authors have worked with a number of groups across the USA to develop tribal exposure scenarios including the Spokane tribes and others (Harper et al. 2012). Harper et al. (2012) provides a good overview of the work undertaken and provides a general model, and an example.

4.3.2 SWINOMISH INDIAN TRIBAL COMMUNITY INDIGENOUS HEALTH INDICATOR FRAMEWORK

The Coast Salish Swinomish tribal community in Washington State USA have developed an Indigenous Health Indicator (IHI) framework to help them assess tribal health impacts from contaminated lands and waters (Donatuto et al. 2011; Donatuto et al. 2016; Ranco et al. 2011). This framework helps to identify, measure and evaluate intangible values that are fundamental to the definition of Indigenous health in the context of environmental change (Donatuto et al. 2011; Donatuto et al. 2016). The IHI framework was developed using multiple methods, including tribal community interviews, tribal records, published international definitions of Indigenous health and other previous research to develop health measures for Indigenous peoples. The tool was originally thought to be used within existing risk assessment framework, but it was realised that the indicators were not compatible with conventional quantitative risk assessment and should be used in parallel with the conventional methods.

The IHI framework comprises six IHIs - community connection, natural resources security, cultural use, education self-determination, and resilience. Each IHI has a number of descriptive attributes, which are measured and weighted during the evaluation of particular scenarios by the community. The IHI framework is able to inform and amend policy and regulation within the field of human health risk assessment, but also be flexible enough to be modified to fit each community so that they assess their own health and wellbeing. The tool has also been recently used to assess climate change risk (Donutato et al. 2019).

This latter case study has much in common with the Yannarumi model because of its emphasis on health and wellbeing and the way the model has been developed through continual refinement and testing with the community.

5 Conclusions and recommendations

The Murray-Darling *Basin Plan* (2012) requires Australian Basin states to take into account risks to Indigenous values and uses associated with water. This Goyder Institute project has developed a workable and socially just method for conducting water resource risk assessments that more effectively brings together Indigenous leaders, scientists and water planners. This has required collaboration between University-based researchers, Ngarrindjeri researchers, water planners and natural resource management specialists, to translate and connect Indigenous risk assessment to existing water planning risk assessment. The research relied on a long-term partnership between DEW, the Ngarrindjeri Nation, the Goyder Institute for Water Research and university-based researchers.³⁰ This project was both multidisciplinary and interdisciplinary, but most importantly was successful because of strong Indigenous leadership and DEW's commitment to policy improvement. It relied on several decades of negotiations and partnerships between the Ngarrindjeri Nation and the State of South Australia. Previous collaborations had produced a series of award-winning innovations in NRM, including formal agreements and risk management tools that laid the foundation to provide the translation and connecting methodologies used in this project to significantly modify DEW's existing *Risk Management Framework for Water Planning and Management*.

This project has translated Ngarrindjeri risk assessment, connected it to existing South Australian water resource risk assessment and produced a new method for the identification of risks to First Nations in water planning and management. These outcomes have direct implications for the important challenges in the MDB for improving the long-term management of this crucial Australian river system. It is hoped that the outcomes of this project will enable First Nations to more effectively include their priorities, values and uses in the ongoing care for river systems, and NRM more generally. A crucial element of the improved engagement strategy was the development of a set of *First Nations Engagement Guidelines* that should also have broader applicability to improved planning relationships between First Nations and non-Indigenous parties. We envisage that this research will make an important contribution to improving Indigenous wellbeing, increasing Indigenous self-determination and moving towards a just relationship between First Nations and the Australian State.

Ngarrindjeri Yannarumi has equivalences amongst Indigenous nations internationally and it can be understood as a form of 'Indigenous Environmental Studies and Sciences'. Kyle Powys Whyte (2018, p. 138) argues that:

Indigenous Environmental Studies and Sciences (IESS) is an emerging field that centers Indigenous historical heritages, living intellectual traditions, research approaches, education practices, and political advocacy to investigate how humans can live respectfully within dynamic ecosystems.

This project has advanced assessments of risk to the ecological health of non-Indigenous management entities, such as 'connected water sources', to take into account political, legal, human rights and justice issues. In western settler democracies such as Australia, New Zealand, the USA and Canada, principles and commitments from international treaties such as the United Nations Declaration on the Rights of Indigenous Peoples (2007) should be important reference points for the risk assessments that underpin new policies and new plans.

Recently, project team members, Steve Hemming, Daryle Rigney and Grant Rigney, along with colleagues, Simone Bignall and Shaun Berg argued that:

In a settler colonial context, Yannarumi therefore also conveys an understanding of the respectful kind of relational agency required for the peaceful negotiation of coexisting powers that may not necessarily have commensurate interests in an ecosystem, or compatible methods for natural resource management and the governance of interconnected lifeforms.

(Hemming et al. 2019, pp. 223)

Ngarrindjeri Yannarumi has provided a form of engagement and assessment that has been mutually enriching. It has enabled Indigenous philosophies and ways of being to inform new non-Indigenous understandings, that better respond to the health needs of both people and environment, and so translate to more effective policy solutions. This has resulted in an enrichment of conceptual and scientific understanding for both Indigenous and non-Indigenous participants, who have begun to develop a new understanding of where cross-cultural philosophical synergies lie and may be utilised for maximum mutual benefit.

Creative indigenous resilience is interwoven with the health of many internationally recognised river systems and wetlands and this complex relationship has continued for many thousands of years (see Toussaint, Sullivan and Yu 2005; Birkhead *et al.* 2011; Jackson and Palmer 2015; Cosens and Chaffin 2016; Hemming and Rigney 2016; Whyte et al. 2018). This project is important evidence of this Indigenous resilience and that the creative agency is often under-valued, misunderstood or absent from international NRM literature.

5.1 Recommendations

Based on the findings of this study, a number of recommendations are made for improvements to water resource risk assessment and management and more general recommendations for increasing Indigenous self-determination and agency in Australian water and NRM planning. We recommend that:

1. DEW's *First Nations Engagement Guidelines* be applied across DEW programs and in other relevant South Australian Government sectors.
2. Where possible risk assessments (and research projects) adopt a collaborative engaged model to more effectively support policy change and co-education.
3. Policy and planning align with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international treaties and protocols.
4. The UNDRIP is utilised by DEW as a framework for developing risk criteria.
5. The new category of risk to First Nations identified by this project should be considered for adoption in water planning risk assessment in South Australia, and more broadly in Australia.
6. Indigenous nations should be supported to continue their unique roles in the reproduction of healthy rivers systems. This principle should be prioritised as a critical and socially just component of 'wise-use' and a test of responsible management.

7. Indigenous people need to be recognised as experts in risk assessment and the mechanisms for engagement with this expertise should be formalised through agreements with First Nations.
8. Formal protection for First Nation knowledge needs to be established in all risk assessments involving such knowledge.
9. The water resource risk assessment methodologies developed in this project should be trialled in other parts of the MDB.
10. The former South Australian Aboriginal Regional Authorities policy and the KNYA taskforce engagement model should be valued for their contributions to Indigenous capacity building, respectful relations and innovations in natural resource management.³¹

⁵ Indigenous wellbeing and Murray futures is used here as a heading here to draw attention to this project's fundamental Ngarrindjeri objective, shared with members of the project's research team, to develop policies and practices that improve Indigenous wellbeing, respect Indigenous ways of being and create pathways towards just futures.

⁶ We use the term 'Country' to represent Indigenous understandings of life-worlds that do not incorporate a fundamental western divide between nature and human. For Ngarrindjeri the concept Ruwe/Ruwar (lands, waters, all living things, body and spirit) can be translated as 'Country'.

⁷ Ngarrindjeri Yarlumar-Ruwe (Sea Country) represents the interconnected characteristics of Ngarrindjeri Country, incorporating the concept of Ruwe/Ruwar (lands, waters, all living things, body and spirit) and what we describe as principles of 'reciprocal interconnected benefit'.

⁸ By 2017 South Australia was beginning a process of negotiating treaties with First Nations. In 2018, with a change of governments, this offer of treaties was withdrawn by the incoming conservative Liberal Government.

⁹ See *Ngarrindjeri Nation Yarlumar-Ruwe Plan* (2006) for an account of the devastating impacts of colonisation for the Ngarrindjeri nation. Howitt, Haven and Veland (2012) argue that colonialism continues to be the most significant disaster for Indigenous peoples.

¹⁰ More recently the Ngarrindjeri Aboriginal Corporation (NAC) has become involved in water planning and currently has a contract with DEW to undertake Ngarrindjeri work under the *Living Murray Program*.

¹¹ During the course of the project University-based researchers moved from Flinders University (SA) to the University of Technology Sydney. The project is a Ngarrindjeri Regional Authority with a final deliverable bringing in the comparatively recent Ngarrindjeri Aboriginal Corporation (NAC) due to Ngarrindjeri research team members internal Ngarrindjeri organisational arrangements.

¹² DEW was formerly the Department for Environment, Water and Natural Resources (DEWNR).

¹³ We argue that this continuing negative disposition is a direct consequence of the absence of treaties in Australia (see Hemming et al. 2019).

¹⁴ Daryle Rigney was lead negotiator for the Ngarrindjeri Nation and Steve Hemming was also part of the negotiating team.

¹⁵ It is important to note that this Goyder Yannarumi project was named in the MDB WRP and associated risk assessment documents as a priority SA government project designed to produce an improved water resource planning risk assessment with the capability of identifying and addressing risks to Indigenous values and interests (see DEW 2019 *South Australian River Murray Water Resource Plan Area Risk Assessment*, DEW Technical report; DEW 2019, *South Australian River Murray Water Resource Plan 2019*, SA Department of Environment and Water, Adelaide, pp.154-155).

¹⁶ The Ngarrindjeri governance working party's primary role was to develop a proposal for the Ngarrindjeri Nation to establish a new peak body. This led to the establishment of the Ngarrindjeri Regional Authority as the Nation's peak body. The working party was chaired by the Ngarrindjeri Rupelli, George Trevorrow (deceased). The Rupelli is the head of the traditional Ngarrindjeri government called the Tendi. The Tendi was formally re-established in the mid-1980s, making public the Ngarrindjeri processes of decision making that had continued to function from the time of European invasion and colonisation.

¹⁷ South Australia was established in 1836 as a British colony and became a State of the newly formed Commonwealth of Australia in 1901.

¹⁸ In 2007 on the lands of the Lummi Nation, United States, the Ngarrindjeri nation represented by Daryle Rigney signed an historic treaty with eleven Indigenous nations from Canada, United States and New Zealand – see <http://www.indigenoustratistreaty.org/>. In 2017 the Ngarrindjeri Nation began a process of treaty negotiation with the South Australian Government. It has only been in the last few years that State Governments such as South Australia and Victoria have entertained the possibilities of treaties with Indigenous peoples. In 2018 a conservative government was elected in South Australia and this government has declared that it will not negotiate treaties with First Nations.

¹⁹ The South Australian Department for Environment and Heritage (DEH) is developing a Long-Term Plan for the Coorong, Murray Mouth and Lower Lakes (CLLMM) region in partnership with the community, scientists and industry. This is part of the South Australian Government's \$610 million Murray Futures program, funded by the Australian Government's Water for the Future program.

²⁰ Ngarrindjeri learned from engagement in the CLLMM Ramsar/ECD project that the characteristics of Ngarrindjeri Yarlumar-Ruwe had been defined by western science and other non-Indigenous interests in the ECD, and that this definition formed the basis of subsequent government risk assessments governing future project planning and management decisions.

²¹ The original project proposal was developed and submitted in late 2016 by Steve Hemming, Daryle Rigney and Lachlan Sutherland. The project extended over several years (2016-2020).

²² Steve Hemming, Daryle Rigney, Grant Rigney and lawyer Shaun Berg played a leading role in the drafting and negotiation of this agreement.

²³ This article received the 2020 Eric Anderson award for best article published in the *Australasian Journal of Environmental Management* during the year.

²⁴ This project is the fourth in a series of Goyder Institute research projects that have been directed towards translation, connection, improved relationships and increased justice for Ngarrindjeri in water management and NRM more generally (see Hemming & Rigney 2014, 2016). This work has been informed by previous Goyder research projects E.1.3, E.1.7, and E.1.17.

²⁵ Research ethics approval was obtained through the Flinders University Social and Behavioural Research Ethics Committee (SBREC).

²⁶ These members of the Goyder team were part of the Ngarrindjeri treaty negotiating team. Professor Daryle Rigney was the lead negotiator.

²⁷ Steve Hemming, Daryle Rigney, Grant Rigney and Amy-Della Sale (members of the research team) did provide more general input into several of the WRPs and conducted a preliminary Yannarumi assessment for the development of the Water Allocation Plan for the Peak, Roby and Sherlock Prescribed Wells Area (SAM-DNRM Board 2017)

²⁸ It is important to note that Ngarrindjeri and other First Nations continue to have an interest in the existing risk categories.

²⁹ This report is an account of the long-term development and complexities of the translating and connecting methodologies and tools developed to enable a Ngarrindjeri/DEW water planning risk assessment to be conducted.

³⁰ The university-based and Ngarrindjeri research team members are of the opinion that the Goyder Institute consider changes to its management structure to support improved engagement with First Nations and a greater capacity to manage, assess and support Indigenous research from across the sciences, humanities and social sciences.

³¹ This approach aligns with what would be expected in a treaty relationship between First Nations and the settler-state.

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Appendix 1: Goyder Project Plan (HE.17.03) Translating Ngarrindjeri Yannarumi into water planning risk assessments

Goyder Institute Research Project Plan

1. Project Title

Translating Ngarrindjeri Yannarumi into water resource risk assessments

2. Project number (if known)

HE-17-03

3. Research Leader, Title and Organisation

Associate Professor, Steve Hemming (FUSA)

4. Goyder Institute Research Impact Area

Healthy Ecosystems

5. Outcomes intended

- Support for the protection of Ngarrindjeri 'cultural' values associated with water through the development of a translation/connection methodology for water resource risk assessments that take into account Ngarrindjeri Yannarumi principles for wellbeing. The methodology will provide a framework and methods with which to combine elements of established risk assessment techniques with processes of engagement and consultation that enable the incorporation of Ngarrindjeri values into risk assessment for water resource plans.
- Continued delivery of State Government commitments to the Ngarrindjeri Nation through existing agreements and Statements of Commitments relating to water resource plans (WRPs).
- Strengthening of South Australia's WRP risk assessment to incorporate risks to Aboriginal 'cultural' values and wellbeing, through a focussed trial with the Ngarrindjeri Nation.
- Identification of potential management strategies to minimise identified risks to Aboriginal 'cultural' values.
- Recommended amendments/additions to DEWNR's risk management framework for water planning and management to support the integration of Aboriginal cultural values. Enabling the WRP and broader water planning, to take into account the quadruple bottom line (cultural, social, economic and environment aspects) and aligning SA's planning approaches with International conventions (United Nations Declaration on the Rights of Indigenous Peoples, Convention on Biological Diversity).
- National and international publication of results supporting changes in Indigenous engagements in water resource planning and management.
- To connect innovations developed in this project to contemporary State Government NRM planning (eg State NRM Plan development).

6. Start Date, Completion Date and Critical Milestones

This project will require 12 months to be completed. Proposed to commence on 1 January 2018 (subject to Flinders University Human Ethics approval) and conclude 31 December 2018.

7. Project Summary (less than 300 words)

The Murray-Darling Basin Plan seeks Basin states to consider Aboriginal cultural values in water resource risk assessment. Currently South Australia, like other Basin states utilise risk assessment processes that are unable to integrate Aboriginal values and hence Aboriginal interest are not being meaningfully integrated into this fundamental element of water planning. This is a significant policy gap for all Basin states.

The Ngarrindjeri Regional Authority (NRA), Flinders University and DEWNR are currently working collaboratively to support Ngarrindjeri engagement in Water Resource Plan (WRP) development. The NRA and DEWNR have entered into a Water Resource Planning Statement of Commitment with an associated Cultural Knowledge Agreement and have formed a working group to support the engagement process, that include NRA's partners from Flinders University.

Ngarrindjeri are the Traditional Owners of the Lower Murray, Lower Lakes, Coorong and surrounding region. Over the past 15 years, Ngarrindjeri have emerged as a leading Indigenous nation in relation to Indigenous engagement in water resource management in the River Murray. Through the Murray Futures program, the Ngarrindjeri Regional Authority with its partner Flinders University Office of Indigenous Strategy and Engagement, have established a range of innovative Indigenous engagement approaches that support Ngarrindjeri engagement. These approaches were recognised through winning the 2015 Australian Riverprize. Murray Futures investment has supported the emergence of the Ngarrindjeri Yannarumi Assessment process that enables assessments of the environmental and water health, based on Ngarrindjeri principles and philosophies.

This project will develop and trial a methodology that supports the translation of Ngarrindjeri Yannarumi assessments into water resource risk assessments. The methodology will articulate the points of connection between the Ngarrindjeri Yannarumi assessment process and the water risk assessment process. The methodology will inform the necessary adaptations required to DEWNR's current water risk assessment conceptual models to integrate Aboriginal cultural values. The methodology element of the project will provide guidance on how the methodology is implemented, and build upon the current water risk assessment methodology by incorporating best practice Aboriginal engagement approaches and principles.

It is anticipated that the outcomes from the trial will inform the risk assessment for the River Murray water resource plan. From a Ngarrindjeri perspective, this work is central to supporting Indigenous people to look after their rights to water. This innovative approach to translating and connecting Ngarrindjeri values into water planning has the potential to improve SA's risk assessments which are being developed to underpin the State's WRPs (for accreditation under the Murray-Darling Basin Plan). While the trial will focus upon connecting with Ngarrindjeri values, many of these are shared by other Aboriginal Nations in the SA Murray-Darling Basin and this will likely support the engagement of other Nations in the risk assessment process.

The project will support two-way learning between DEWNR and Ngarrindjeri and also investigate potential adaptation of DEWNR's existing water risk assessment process, based on the AS/NZS ISO31000:2009 standard.

This work has been informed by previous Goyder research projects E.1.3, E.1.7 and E.1.17 (partnerships between NRA and Flinders University).

8. Key Researchers

Descriptions of the investigators and technical staff for the project are provided below. A list of research grants and publications for the two Flinders University investigators for the last five years is provided at Attachment 1.

Investigators:

Associate Professor Steve Hemming (FUSA) – 0.05 FTE
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Steve Hemming is an Associate Professor and Associate Dean, Research (Indigenous) at Flinders University. Over the last 20 years Steve has worked with Indigenous leaders on research projects that address the relationship between natural resource management, Indigenous heritage management, Indigenous governance and wellbeing. Steve is Co-Director of the Ngarrindjeri Regional Authority's Research, Policy and Planning Unit. He has worked on a number of research projects that support the development of water policy relating to Indigenous engagement. He has had long-term experience working with Department of Environment, Water and Natural Resources (DEWNR), Environmental Protection Authority (EPA), the Natural Resources Management (NRM) Boards, SA Water and other organisations responsible for water policy development in the State.

Professor Daryle Rigney (FUSA) – 0.025 FTE
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Professor Daryle Rigney is a citizen of the Ngarrindjeri nation and Dean of Indigenous Strategy and Engagement at Flinders University. As a Ngarrindjeri leader Daryle plays a leading role in developing relationships between Indigenous nations internationally on matters of mutual interest, including environment and scholarly exchange. He is co-chair of the United League of Indigenous Nations and Co-Director of the Ngarrindjeri Regional Authority's Research, Policy and Planning Unit. He has had long-term experience working with Department of Environment, Water and Natural Resources (DEWNR), Environmental Protection Authority (EPA), the Natural Resources Management (NRM) Boards, SA Water and other organisations responsible for water policy development in the State.

Grant Rigney – 0.2 FTE
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Grant Rigney is a citizen of the Ngarrindjeri nation and former Chair and a current Director on the Board of the Murray Lower Darling Rivers Indigenous Nations (MLDRIN). Grant is a member of the Basin Community Committee and has worked in the South

Australian Government as Indigenous Program Coordinator for the Murray-Darling Basin Authority's The Living Murray program. Grant has extensive experience and knowledge of water legislation and policy and water planning. He has worked with Ngarrindjeri leaders to progress Ngarrindjeri water rights and interests. He has an extensive knowledge of the Murray-Darling Basin Plan and broader tools and processes being used to engage Aboriginal Nations in water resource planning and management.

Lachlan Sutherland – 0.05 FTE
Manager, Aboriginal Engagement and Reconciliation, DEWNR
Ph: 08 8204 9363; Mb: 0457 545 584
Lachlan.sutherland@sa.gov.au

Lachlan Sutherland has been working with Indigenous land and sea management for over 15 years. He has worked within DEWNR for the last 8 years with a focus on Aboriginal engagement in major River Murray infrastructure projects and Ramsar related projects in the Coorong, Lower Lakes and Murray Mouth region. More recently Lachlan has lead DEWNR's Murray-Darling Basin Plan Aboriginal engagement program. These projects have sought to improve the recognition of Aboriginal cultural values and interests into regional strategies and plans, including water resource plans. He has also been heavily involved in progressing procedural change within DEWNR to improve Aboriginal engagement outcomes and Reconciliation action.

Technical Advisors:

Hugh Wilson (DEWNR SMK) – 0.2 FTE for 3 months
Senior Aquatic Ecologist, Science and Information Group, DENWR
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Hugh Wilson holds a PhD from the School of Earth and Environmental Science at the Adelaide University. He is a senior aquatic ecologist with the Evaluation and Ecological Science Unit in DEWNR. Hugh was a member of the project team that developed DEWNR's Risk Management Framework for Water Planning and Management. Since this time, Hugh has been instrumental in developing water resource risk assessment methodologies to inform a range of planning and decision making contexts. Recently he has been facilitated the technical input into risk assessments informing the three Basin Plan water resource plans in South Australia. Hugh has technical and practical expertise in the application of the AS/NZS ISO31000 risk assessment standard in relation to water resources management.

Noëlle Overdeest (DEWNR Water) – 0.1 FTE for 3 months
A/Principal Advisor, Group Executive Director, Water, DEWNR
Ph: 08 8463 6909
Noelle.overdeest@sa.gov.au

Noëlle Overdeest holds a degree in Environmental Science from the University of New England and completed part of her degree at Washington State University. Noëlle has over 13 years experience working in environmental management for mining companies in Australia and Mexico. During this time, she has worked with companies to undertake gap analyses and detailed risk assessments on key environmental attributes. More recently, Noëlle has worked within DEWNR on developing the State's water resource plans (required under the Murray-Darling Basin Plan), with a focus on co-managing and developing risks assessments to underpin each of the water resource

plans. Through her time in Government and working in private industry, Noëlle has worked closely with Aboriginal Nations on a range of programs aimed at improving the wellbeing and involvement of Aboriginal people in Natural Resource Management.

9. Rationale

Under Chapter 10, Part 14 of the Murray-Darling Basin Plan, South Australia must meaningfully engage Aboriginal Nations in the development of WRPs. This includes identifying a Nation's objectives and outcomes related to the management of water resources and having regard for their cultural values and uses. Basin States are utilising risk assessments to underpin the development of WRPs. Currently DEWNR has no process to adequately assess risks to Aboriginal cultural values. This impacts on the State's ability to develop strategies to minimise these risks.

This project is therefore a priority policy gap and issue for the Department. Learning from this project could also be shared and utilised more broadly across the Murray-Darling Basin and within Natural Resources Management (NRM) in South Australia.

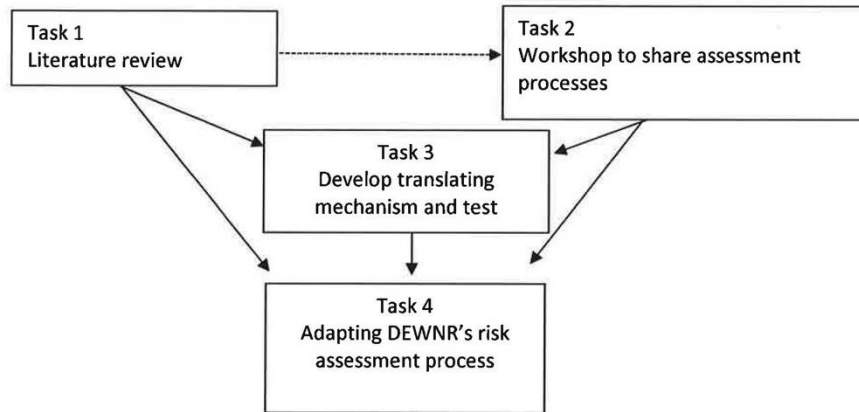
Using Ngarrindjeri and non-Indigenous research methods and risk assessment methodologies, the project will identify linkages between the two processes and develop a replicable and transparent methodology. One of the fundamental principles in developing the methodology and associated risk assessment methodology, will be to ensure that the integrity of Ngarrindjeri knowledge is protected while further developing Ngarrindjeri engagement mechanisms. The trial stage will apply the methodology and methodology to assess risks to Ngarrindjeri values across SA's three WRP areas that overlap the Ngarrindjeri Nation. Given State Government timelines associated with the delivery of the State's three WRPs, the application of this methodology will be utilised in the risk assessment planning process associated with the River Murray.

The project will also develop recommendations for the adaptation of DEWNR's water risk assessment process, based on the AS/NZS ISO31000:2009 standard, to enable it to integrate Aboriginal cultural values. This will be undertaken based on principles that are considered shared across Aboriginal Nations in the SA Murray-Darling Basin region, and support the outcomes of this work being trialled with other Aboriginal Nations.

10. Project Structure

(diagram showing the project tasks and activities and their interdependencies)

The project will include: 1) Desktop study, 2) Workshop and education process to share the two knowledge and assessment processes, 3) Development of translating mechanism and process and testing, 4) Adaptation of DEWNR's water risk assessment process.



11. Task Descriptions

Describe the tasks necessary to achieve the intended outcomes.

For each task, identify:

TASK NAME	1. Literature Review
TASK LEADER	Steve Hemming
TASK OBJECTIVE	Review National and International contexts regarding the integration of Indigenous knowledge, values and wellbeing into natural resources management risk assessments.
TASK OUTPUTS	Literature Review
RESOURCES REQUIRED	Time allocation of project team
TASK START DATE	Commencement following Flinders University human ethics approval.
TASK END DATE	28 February 2018
RELATIONSHIP TO OTHER TASKS	Inform Tasks 2, 3, and 4 as to methods used by other jurisdictions to integrate Indigenous values into risk assessment processes, including through the use of the AS/NZS ISO31000 standard.
SPECIFIC DELIVERABLES & DELIVERY DATES	Literature Review – 28 February 2018
METHODS TO BE USED TO TRANSFER KNOWLEDGE TO STAKEHOLDERS	Will be used to inform approach to other tasks. Informs final report and publication.
BUDGET	\$5,810
BUDGET JUSTIFICATION	Desktop literature review led by A/Prof Hemming – some time inputs from Prof Rigney and other team members
Linkages to other tasks	2, 3 and 4.

TASK NAME	2. Workshop to share assessment processes
TASK LEADER	Lachlan Sutherland
TASK OBJECTIVE	For DEWNR staff to improve their understanding of the Yannarumi assessment process and for Ngarrindjeri to improve their understanding of the DEWNR water risk assessment process. For DEWNR staff, Ngarrindjeri and researchers to better understand how these two processes can connect
TASK OUTPUTS	Interim Ngarrindjeri Murrundi (River Murray) risk assessment
RESOURCES REQUIRED	Travel costs, preparation and running workshop; NRA meeting costs
TASK START DATE	1 March 2018
TASK END DATE	30 April 2018

RELATIONSHIP TO OTHER TASKS	<i>Task will inform translating mechanism proposed in Task 3 and will also contribute to recommendations for adapting the DEWNR water risk assessment process in Task 4</i>
SPECIFIC DELIVERABLES & DELIVERY DATES	<i>Interim Ngarrindjeri Murrundi risk assessment methodology – 24 November</i>
METHODS TO BE USED TO TRANSFER KNOWLEDGE TO STAKEHOLDERS	<i>Presentation of interim strategy/ methodology to Project Team & NRA Yarlular-Ruwe Program</i>
BUDGET	<i>\$32,031</i>
BUDGET JUSTIFICATION	<i>Project team time allocations, meeting costs and travel cost</i>
Linkages to other tasks	<i>3 and 4</i>

TASK NAME	3. Develop translating mechanism and test
TASK LEADER	<i>Steve Hemming</i>
TASK OBJECTIVES	<i>Create a connecting methodology and process that can translate Ngarrindjeri Yannarumi assessment outcomes into water resource risk assessment, while also considering principles that could be utilised to engage other Aboriginal Nations. Test the methodology and process using the River Murray context. Document a methodology for applying the conceptual model to Aboriginal engagement for the River Murray WRP risk assessment.</i>
TASK OUTPUTS	<i>Workshop to test methodology and process</i>
RESOURCES REQUIRED	<i>Workshop costs, travel costs and time allocation of project team</i>
TASK START DATE	<i>1 March 2018</i>
TASK END DATE	<i>31 August 2018</i>
RELATIONSHIP TO OTHER TASKS	<i>The methodology will be informed by learning and experience of project team and Ngarrindjeri representatives during task 2 workshop.</i>
SPECIFIC DELIVERABLES & DELIVERY DATES	<i>Updated Murrundi Risk Assessment Report – 30 May 2018 Methodology and documented process – 31 July 2018</i>
METHODS TO BE USED TO TRANSFER KNOWLEDGE TO STAKEHOLDERS	<i>Workshop involvement Draft methodology tabled with Project Team and NRA Yarlular-Ruwe Program Updated risk assessment report to River Murray Coordinating Committee</i>
BUDGET	<i>\$32,658</i>
BUDGET JUSTIFICATION	<i>Required to support project team and Ngarrindjeri investigator / participants to</i>

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	<i>input to the mechanism and testing environment.</i>
Linkages to other tasks	<i>1, 2 and 4</i>

TASK NAME	4. Adapting DEWNR's risk assessment process
TASK LEADER(S)	<i>Hugh Wilson /A/Prof Hemming</i>
TASK OBJECTIVE	<i>To develop a prototype water risk assessment methodology and process based on the AS/NZS ISO31000 that connects with Aboriginal wellbeing principles</i>
TASK OUTPUTS	<i>Recommendations for adapting DEWNR's risk management framework for water planning and management to address Aboriginal wellbeing principles. The recommendations will address the scope of the ISO 31000 risk management process including setting context, risk identification, risk analysis, risk evaluation and risk treatment.</i>
RESOURCES REQUIRED	<i>Time allocation from project team</i>
TASK START DATE	<i>1 August 2018</i>
TASK END DATE	<i>31 October 2018</i>
RELATIONSHIP TO OTHER TASKS	<i>Informed by any adaptations or approaches to integrating Indigenous values or wellbeing principles into risk assessment identified in Task 1. Future informed by greater understanding of the Yannarumi and high level Indigenous wellbeing principles shared in Task 3. Recommendations based on learning and develop from Task 3.</i>
SPECIFIC DELIVERABLES & DELIVERY DATES	<i>Recommended amendments/additions to DEWNR's risk management framework for water planning and management – 31 October 2018 Final Report – 31 December 2018</i>
METHODS TO BE USED TO TRANSFER KNOWLEDGE TO STAKEHOLDERS	<i>Tabling with Project Team Presentation to Science and Information Group and Water Group officers involved in risk assessment</i>
BUDGET	<i>\$50,812</i>
BUDGET JUSTIFICATION	
Linkages to other tasks	<i>1, 2, 3</i>

12. Project Deliverables

Identify the datasets, methods, assets, research papers, technical reports, other communicates that will be delivered by the project. For each deliverable, identify the task that will be responsible for its delivery and the timeframe.

Task 1: Literature Review – 30 September

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- Task 2: Interim Ngarrindjeri Murrundi risk assessment methodology (demonstrating points of connection between Ngarrindjeri Yannarumi process and water risks assessment process and appropriate Aboriginal engagement methodology) – 24 November*
- Task 3: Updated Murrundi Risk Assessment Report to be tabled with the River Murray Coordinating Committee and Water Resources Steering Committee for consideration and integration into the River Murray Water Resources Plan – 28 February 2018
Connecting methodology and documented process – 31 March 2018*
- Task 4: Recommended amendments/additions to DEWNR’s risk management framework for water planning and management to enable it to equitably and appropriately integrate Aboriginal cultural values – 31 May 2018
Final Report – 31 July 2018*

13. Project Governance

How will the project be managed? How will milestones and tasks be tracked to ensure the project is on schedule and to budget? How will the users of the research outputs be involved in providing feedback on the research questions and outputs?

The project will be managed by the project leader, Associated Professor Hemming and Mr Lachlan Sutherland. Monthly project team meetings will be established to support project planning and logistics between NRA, Flinders and DEWNR. The project will be identified as a part of the NRA/DEWNR Water Planning SOC Working Group and will work within the SOC Water Planning and Cultural Knowledge Agreement. The project team will provide feedback on draft desktop report, workshop outcomes and workshop connecting mechanism and risk assessment adaptation options and final report. The project will seek ethics approval for the discussions, workshops and feedback with the NRA’s Yarlular-Ruwe Program.

To ensure project connection with senior DEWNR water policy and information officers, Dan Jordan, Director of Water Policy in DEWNR will be the Project Sponsor. Update reports will be tabled with the project sponsor on a quarterly basis. Updates will also be tabled with the River Murray Coordinating Committee and Water Resources Steering Committee. It is proposed that as the risk assessment reports are generated they will be integrated into the Chapter 10, Part 14 component of the River Murray WRP.

Grant Rigney will engage the NRA’s Yarlular-Ruwe Program for advice and input to the project and will coordinate Ngarrindjeri engagement in workshop activities. Lachlan Sutherland will be responsible for coordinating DEWNR input and engagement in workshops and planning activities. Project results will be delivered in the form of a Murrundi (River Murray) water resource risk assessment report, recommendations report for adapting DEWNR’s water risk assessment process, and peer reviewed journal article and final report.

DEWNR and NRA will also document the process in the River Murray Water Resources Plan and the risk assessment outcomes will be integrated into this water resource plan and possibly the River Murray Water Allocation Plan review. This extension work will be tabled with the River Murray Coordinating Committee on a regular basis to support information sharing and incorporation into planning documents. DEWNR will also communicate project outcomes internally.

DEWNR will support the recommended adaptation to DEWNR’s water risk assessment process being raised to the River Murray Coordinating Committee for review, and to other MDB Basin States through the regular water planners forum.

14. Communications Plan, Knowledge Transfer and Capacity Building

The Goyder Institute Secretariat can provide assistance in the development of the Communications Plan. Each Plan should identify any politically sensitive information that might emerge and how it will be managed.

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In which format will the project results be delivered (e.g. reports, software, training, etc.)? Identify the key audience for the information and results developed. How will these results be communicated and transferred to relevant stakeholders?

This project will directly translate Indigenous action research into DEWNR policy through both the River Murray Water Resource Plan risk assessment process as well as directly developing recommendations for the adaptation of DEWNRs risk assessment standard. This will be supported through the mix of project team members, partnership of the NRA and sponsorship of the DEWNR GED for Water.

Two workshops held during the project will support information sharing and communication across both the NRA, DEWNR and Flinders University staff and build respective capacities.

The recommendations on the adapted AS/NZS ISO31000 risk assessment standard will be tabled with the DEWNR Information and Science Group for application across DEWNR's risk assessment activities. DEWNR, in partnership with NRA will also raise the project outputs with the Peramangk and First Peoples of the River Murrumbidgee and Mallee as part of the broader National Partnership Agreement (NPA) funded WRP Aboriginal engagement project.

The project will develop a Final Report and peer review journal article to communicate the project outcomes.

15. Risks

Political, key staff departures, health and safety, commercial/IP, etc. What steps have been taken to reduce risks? What are the contingency plans?

The NRA and DEWNR entered into a Water Planning Statement of Commitment and associated Cultural Knowledge Agreement in 2015. This agreement provides protection and clear processes related to the treatment of Ngarrindjeri Cultural Knowledge divulged to DEWNR staff during water resource planning engagement. The Agreement enables this project to occur.

NRA and DEWNR confirm that this project will be undertaken under the terms of the Cultural Knowledge Agreement executed by the NRA and the Minister for Sustainability, Environment and Conservation in 2015 (Attachment 1).

Key staff have been selected based on their availability for the project. If key staff member is absent for an extended period, an appropriate staff member will be brought into the project. There are no health, safety issues related to this project. There are potential cultural safety and ethics issues. The cultural safety issues will be managed by the Ngarrindjeri Water Coordinator to ensure that appropriate processes are in place for Ngarrindjeri engagement in the project, including workshops. Flinders University will also seek human ethics approval to ensure any risk associated with the project is considered and mitigated.

An outstanding risk is that the project outcomes are not recognised for their value in DEWNR's water risk assessment process and adaptation of the process does not occur. This risk is more likely if the policy need and benefits are not understood at a senior level in DEWNR. The project is engaging the Director, Water Policy as Project Sponsor and senior officers in Science and Information Group that oversee the water risk assessment process.

17. IP Register

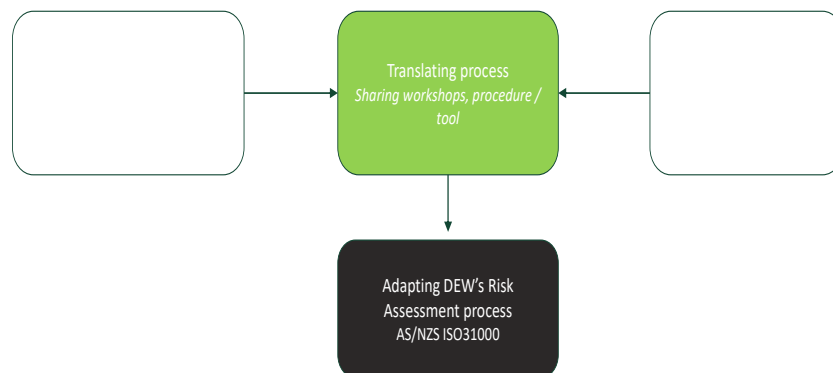
What is the background IP that the different parties bring to this project?

Background IP Description	IP Type	Owner
Flinders academics bring shared IP in relevant publications and reports relating to Indigenous nation building, engagement strategies and agreement-making.	Publications and reports	Flinders University, NRA and in some cases DEWNR
The NRA brings the Ngarrindjeri Yannarumi Assessment process to this project. This process is based on Ngarrindjeri decision-making principles. NRA in partnership with Flinders University's Office of Indigenous Engagement and Strategy have further articulated Yannarumi into an assessment framework.	Model	Ngarrindjeri
DEWNR brings its adaptation of the AS/NZS ISO31000 standard risk assessment process for water resources management to the project.	Model	DEWNR
Water Resources Statement of Commitment between NRA, DEWNR and SE and SAMDB NRM Boards	MOU	NRA and DEWNR
Cultural Knowledge Agreement between NRA and Minister for Sustainability, Environment and Conservation	Agreement	NRA and MSEC

Appendix 2: Integrating Ngarrindjeri wellbeing in water risk assessment

Translating Ngarrindjeri Yannarumi into water risk assessment

- Integrating Ngarrindjeri wellbeing assessment into water risk assessment



Appendix 3: Ngarrindjeri Yannarumi Assessment Table

An example of a wellbeing assessment for the Coorong, Lakes Alexandrina and Albert, Ramsar site. Conducted as part of a re-drafted Ecological Character Description.

Ramsar ECD -Ngarrindjeri Yannarumi assessment

	Kaldowinyeri Creation, Law, Change	Ruwe/Ruwar Country, body, spirit, all living things	Miwi Ngartji spirit, connection resilience	Yannarumi Speaking as Country, responsibility, management	Ngiangiampe Relationships, partnerships	Ngarrindjeri Yarluwar- Ruwe Health assessment
Kaldowinyeri Ngurunderi Creation	Ngurunderi Ruwe/Ruwar All things connected	Katjeri Beautiful, healthy	Pritji Strong	Rupelli Elders Speaking as Country	Tendi, Nguldun Governance, agreements, Being healthy	Katjeri Beautiful healthy
Parpun miwi Colonisation, Longing for wellbeing	Parpun miwi 1985, Ramsar listing, locks, barrages, land cleared	Wiran, Wurangi, Sick, Bad	Pritji, wurreng- wulun Strong, Sorrowful	Mrrild, Blewilin Disconnected, Unhealthy	Wurangi Bad, disrespectful	Blewilin, Pukali Unhealthy, indicators of sickness

Appendix 4: Literature Review – Bibliography

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Appendix 5: Speaking as Country Deed 2014 (Recitals)

NGARRINDJERI SPEAKING AS COUNTRY DEED

This Deed is made on the day of December 2014.

Between:

NGARRINDJERI REGIONAL AUTHORITY INC of 50 Princes Hwy, Murray Bridge, SA 5253 for and on behalf of the Ngarrindjeri People ('Ngarrindjeri')

-and-

MINISTER FOR SUSTAINABILITY, ENVIRONMENT AND CONSERVATION a body corporate pursuant to the *Administrative Arrangements Act 1994* (SA), to be administered by Department of Environment, Water and Natural Resources (South Australia) of GPO Box 1047 ADELAIDE, South Australia, 5001, **ABN 36 702 093 234** ("the Minister")

Recitals:

- A. Ngarrindjeri and the Crown in right of the State of South Australia represented by the Minister for Environment, and Conservation, the Minister for Aboriginal Affairs and Reconciliation, the Minister for the River Murray, and the Minister for Agriculture, Food and Fisheries entered into an agreement titled 'Kungun Ngarrindjeri Yunnan Agreement' on 5 June 2009 ('KNY Agreement').
- B. The KNY Agreement created a respectful basis upon which Ngarrindjeri and the relevant Ministers have been able to develop and expand their relationship.
- C. The Murray Mouth ('Mouth') is a dynamic system, influenced by the flow of River Murray water over the barrages and inward tidal movement from the Southern Ocean. When River Murray flows to South Australia are low, barrage releases are low and sand deposition occurs inside the Mouth causing restrictions and increasing the risk of closure.
- D. It is important that the Mouth stays open to maintain connectivity between the River, the Coorong and the Southern Ocean, to discharge salt and other nutrients out to sea, and to maintain healthy ecosystems in the Coorong.
- E. During the past year, inflow conditions in the River Murray System and South Australia have been relatively low. Since late 2013, as a result of these lower flow conditions, the Mouth has become severely constricted, and is now at risk of closure. The Minister will commence dredging of the Mouth as soon as practicable to maintain an open Mouth.
- F. Dredging has been shown to be the most effective method for keeping the Mouth open under periods of restricted flow over the barrages, in terms of cost and environmental criteria, compared with a range of structural and other methods.
- G. The Parties agree about the importance of freshwater flows down the River Murray.
- H. The Parties acknowledge that the Murray-Darling Basin Plan states an outcome will be pursued of ensuring the mouth of the River Murray is open without the need for

dredging in at least 95% of years, with flows every year through the Murray Mouth Barrages.

- I. The Minister considers that dredging in and around the mouth of the River Murray is necessary for the health of the River Murray, Lower Lakes and Coorong and has requested that the Ngarrindjeri assist in relation to this process. The Minister is committed to ensuring the dredging process is carried out when necessary as quickly and with minimal inconvenience as is reasonably possible.
- J. The Ngarrindjeri assert they have an inherited customary right and duty under their traditional laws and customs to speak for, control and care for their country, knowledge, objects, articles and remains. Ngarrindjeri say:

'The Meeting of the Waters is a fundamental aspect of the Ngarrindjeri world where all things are connected, whether they are living, from the past and/or for future generations. The Meeting of the Waters makes manifest core concepts of Ngarrindjeri culture that bind land, body, spirit, and story in an integrated, interfunctional world. The principles that flow from this cultural system are based upon respect for story, country, the old people, elders and family. The pursuit of these principles is contingent upon maintaining a relationship with country. The violation of these respect principles are manifest through the destruction of Ngarrindjeri yarluwar ruwe (a concept that embodies the connectedness and interfunctionality of their culture) and their effect upon the behaviours and survival of ngatji (the animals, birds and fish). According to these principles and contingent beliefs the "environment" cannot be compartmentalised: the land is Ngarrindjeri and Ngarrindjeri are the land. All things are connected and interconnected. Ngarrindjeri philosophy is based on maintaining the integrity of the relationship between place and person. It is the responsibility of the living to maintain this continuity. The past is not and cannot be separated from the here and now or the future. To break connections between person and place is to violate Ngarrindjeri culture. The objective in undertaking activities upon Ngarrindjeri country should be to not cause violence to Ngarrindjeri culture.'

- K. The Minister recognises that the area in and around the mouth of the River Murray is culturally sensitive and forms part of the Aboriginal Registered Site No. 6626-4727 titled 'the Meeting of the Waters' ('Site'). Ngarrindjeri and the Minister wish to promote a broader understanding of the Site and what actions are desirable to allow it to remain culturally and physically healthy.
- L. The Ngarrindjeri and the Minister wish to implement strategies and programs from time to time where they work together to enhance and foster the cultural well being of the area encompassing the site, including but not limited to achieving fresh water flows down the River Murray sufficient to clear the mouth of the River Murray and support and enhance the inputs of Ngarrindjeri in these processes and activities.
- M. The Minister has agreed to fund the Ngarrindjeri to undertake a number of activities that promote the importance of the Site and develop ways to improve the health of this area.

Appendix 6: Department for Environment and Water First Nations Engagement Guideline (Draft)

Note: These draft guidelines do not include several appendices.

Department for Environment and Water First Nations Engagement Guideline

Draft

Title: First Nations Engagement Guideline

Version: 1.0 in August 2019

Date approved:

Approved by:

Purpose: To establish a recommended approach to First Nation engagement for all DEW projects, policies, planning and programs.

Strategic Alignment: United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP articles 18, 19, 25); Aichi Biodiversity Targets (Target 18); International Union for Conservation of Nature (IUCN Resolution 4.055); Environment Protection and Biodiversity Conservation Act 1999 (s.3f), DEW Reconciliation Action Plan.

* First Nations peoples is used throughout the guideline in recognition that Aboriginal and Torres Strait Islander people are the sovereign people of this land. The term also recognises the diverse language groups as separate and unique sovereign nations. Staff should note that some First Nations peoples may not recognise themselves using this term.

Introduction

The Department for Environment and Water (DEW) recognises Aboriginal Peoples as the First Peoples and Nations of South Australia and that their spiritual, social, cultural and economic practices come from their traditional lands and waters. The Department also recognises that First Nations people* have made and continue to make a unique and irreplaceable contribution to the State.

The State also acknowledges that First Nations Peoples have endured past injustice and dispossession of their traditional lands and waters. Despite this, First Nations Peoples continue to assert their sovereign rights and connection to Country.

'Indigenous peoples are unique rights holders, not merely stakeholders' (Indigenous Peoples' Declaration to World Parks Congress 2003), and have the right to self-determination and to participate in decision making regarding matters that affect them, their Country and culture.

Currently the Department's systems, processes and budgets do not currently support First Nations full participation in line with their rights – this guideline aims to improve this.

This Guideline recognises the need for engagement practices that specifically support First Nations peoples knowledge, innovations and practices being respected and integrated into the Department's programs, policies and projects through the full and effective participation of First Peoples at all levels.

Purpose of the Guideline

The Guideline is for DEW staff to assist them in ensuring that all of the Department's projects:

- Recognise taking First Nations Peoples rights and interests fully into account in the Department's planning and implementation
- Effectively engage First Nations
- Optimise opportunities for providing culturally appropriate and inclusive benefits to First Nations as agreed with them
- Anticipates and avoids negative economic, cultural, social and environmental impacts on First Nations.

Guiding Principles

The following principles inform all stages of the application of this Guideline. It is noted that these are general principles and that specific principles and approaches are developed in collaboration with First Nations.

* First Nations peoples is used throughout the guideline in recognition that Aboriginal and Torres Strait Islander people are the sovereign people of this land. The term also recognises the diverse language groups as separate and unique sovereign nations. Staff should note that some First Nations peoples may not recognise themselves using this term.

- First Nations right to self-determination is respected and supported in project planning and implementation
- [Cultural Knowledge](#) is recognised and respected
- First Nations' free, prior and informed consent is obtained for any activity that involves any of the following:ⁱ
 - Takes place on their Country (lands, waters, seas, sky)
 - May have negative economic, social, cultural or environmental impacts on their rights, resources or livelihoods
 - Involves the use of their Cultural Knowledge
 - Promotes the development and generation of social or economic benefits from cultural heritage sites or resources to which they have legal (including customary) rights.

ⁱ First Nations peoples is used throughout the guideline in recognition that Aboriginal and Torres Strait Islander people are the sovereign people of this land. The term also recognises the diverse language groups as separate and unique sovereign nations. Staff should note that some First Nations peoples may not recognise themselves using this term.

Scope of the Guideline

The Guideline applies to all DEW initiatives and **in any** situation where one or more First Nations have rights, interests and / or connection to the Country in with the project is planned or taking place.

The Guidelines' application should be determined through a case by case basis and in the first instance **through liaison with regional First Nations Engagement contacts within the Department and or Landscapes SA Boards.**

The Guideline seeks to maximise opportunities while managing potential negative impacts.

Opportunities might include:

- First Nations peoples taking a leading role in caring for their Country, including:
 - Greater decision-making role and authority
 - Applying their knowledge to projects, policies and programs
 - Employment opportunities
- Improved outcomes through the inclusion of First Nations peoples knowledge and understanding of their Country
- Recognition of, and giving effect to, First Nations interests
- Improved skills and experience for First Nations peoples and DEW staff
- Improved relationships between First Nations organisations and DEW.

Negative impacts might include:

- Any form of material or non-material livelihood risks to First Nations, including:
 - loss of customary rights to lands, waters and natural resources;
 - changes in land and natural resource use promoted by the project that result in vulnerability of livelihoods
- Disturbance of social, spiritual and cultural identity, connection to Country and social cohesion within and between First Nations and the broader community
- Restrictions to First Nations rights to self-determination, values, cultural practices and expressions.

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Applying the Guideline

Defining your purpose – start by assuming First Nations peoples will have an interest

The first step in preparing for a First Nations engagement process is ensuring that you clearly define the purpose of the engagement and what you want to achieve. For the Department's purposes this context means the policy, project or purpose of matter for which you intend to engage on.

As part of defining your purpose and context it is important for project staff to understand the [policy and legislative settings for the Department's First Nations engagement](#). This information will inform:

- First Nations specific context for planning and risk assessment
- Clarify broader strategic alignment of your initiative
- Effective reporting on meeting legislative / policy obligations.

It is also important for the project team to be aware that First Nations have a range of interests (including cultural, social, environmental and economic sectors). Remember to think broadly across these sectors and consider any intersects or overlaps with First Nations interests and the purpose of the project.

Consider these points in defining your purpose:

- What are you testing or developing?
- What are your key messages?
- What are the decisions required?
- What relevance does this have in the cultural, social, environmental and economic sectors?
- Are other SA Government agencies relevant to the purpose?

A key step in defining your project purpose is engaging early with internal [First Nations Partnerships Officer](#).

Engage while defining the scope and defining the problem. Engage early because it takes time to develop skills. Capacity and partnerships

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Who to engage with

Who to engage with can depend on whether the purpose of your project is specific to a geographical area. The overarching principle is inclusive engagement – those who will be affected are entitled to be involved in the process.

First Nations People of Country within the project area also need to be engaged exclusively and commitments under Agreements and Protocols and / or statutory commitments may also require that you engage with particular people or groups.

The approach is summarised in Appendix 1.

Determining the geographical relevance of the project's purpose will enable you to determine your audience on a local, regional or state scale. It is important to understand that projects of smaller scale may still cross the Country of two or more First Nations. Think broadly – your purpose may have state and regional impacts or several local impacts.

Now you can begin making a list of First Nation organisations, individuals, communities, Councils and Aboriginal community organisations to engage with.

The project team will need to:

- Identify First Nations of Country (visit [NatureMaps](#) and identify the Native Title (NT) determinations, claims and Indigenous Land Use Agreements in the project area)
- Identify respective First Nations Plans and Agreements (review the [Library of First Nation engagement tools](#) as well as [Co-Management Agreements](#) and [Indigenous Land Use Agreements](#))
- Identify the First Nation representative bodies (Native Title holding body /claimants).

If your project is state-wide you may also need to consider the engagement of State-wide collectives, peak bodies and Commissioners. These include:

- Commissioner for Aboriginal Engagement (provides advice to SA Government)
- South Australia Aboriginal Advisory Council (SA Government's peak advisory body)
- First Nations of South Australia Corporation (collective of NT holders and claimants)
- South Australian Native Title Services (Native Title Service Provider for SA)
- Department of the Premier and Cabinet – Aboriginal Affairs and Reconciliation.

For contact details liaise with an internal [First Nations Partnerships Officer](#).

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How to engage

Engagement refers to the range of methods and activities that are used to interact with First Nations peoples.

Engagement that gives appropriate consideration to First Nations participation, supports early engagement to shape your initiative, voice in decision making and values are likely to be more effective.

Assessing the level of significance your project purpose may have to First Nations – by considering the sectors and the commitments under existing Agreements / Protocols / Legislation - will help you select an appropriate engagement method.ⁱⁱ

The approach you take with a specific First Nation may also be informed by the existence of existing engagement forums, projects or resourcing. Aligning your work to First Nations plans and coordinating engagement with existing arrangements may reduce the administrative burden for the respective First Nation.

The IAPP spectrum of engagement has been adopted below. The engagement guideline provides a sliding scale assessment to help you consider the impact and engagement methods. There will be times where different methods of engagement are appropriate for different audiences and for different stages of your project.

Assume First Nations want to engage and want to engage early in helping define the scope, and incorporate their interests and identify risks.

The spectrum of engagement methods provided:

Inform	The Department will keep First Nations informed about what is happening. Balanced and objective information will be provided to First Nations to assist them to understand the problem, alternatives, opportunities and / or solutions.
Consult	The Department will seek First Nations feedback on drafts and proposals. The Department will ultimately decide. The Department will keep First Nations informed, listen and acknowledge concerns and interests, and provide feedback on how their input influenced the decision.

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Collaborate	The Department and First Nations will work together to determine the issues / problems and develop solutions together that are reflected in proposals and co-develop input to plans and policies. The Department will involve First Nations in the decision-making process but the Department will ultimately decide.
Partner / Co-design	The Department and First Nations will partner to determine the issue / problem, to design the process and develop solutions. The Department and First Nations will make joint decisions.
Empower	First Nations will decide. The Department will implement the decision made by First Nations. ⁱⁱⁱ

Defining and being clear on the level above is critical to an open and transparent engagement process. **Remember processes that give appropriate consideration to First Nations participation and views are likely to be more effective** – the collaboration area of the spectrum above.

Cultural Heritage and Native Title

The Department has legislative responsibilities to protect First Nations cultural heritage under the *Aboriginal Heritage Act, 1988* and consider Native Title rights and interests under the *Native Title Act, 1993*. A range of projects need to consider these legislative obligations as part of its Approvals including but not limited to, projects that involve ground disturbance, altered water regimes, using fire and / or management planning.

It is critical that project schedules provide adequate time to address these matters. For more information see [Appendix 2](#).

While these processes are important from a legal perspective, they are not always the best mechanisms to meaningfully engage with First Nations on a project, policy or program, as they are limited in their scope

Cultural Knowledge

* First Nations peoples is used throughout the guideline in recognition that Aboriginal and Torres Strait Islander people are the sovereign people of this land. The term also recognises the diverse language groups as separate and unique sovereign nations. Staff should note that some First Nations peoples may not recognise themselves using this term.

Projects proposing to engage First Nations in planning with the aim to incorporate cultural knowledge and values need to consider the protection of First Nations Cultural Knowledge. This is an important consideration for all proposals from *consultation* through to *empower*.

A [Cultural Knowledge Guideline](#) and procedure has been developed to guide staff through this process. Liaise with an internal [First Nations Partnerships Officer](#) for more information.

Broader opportunities and information

The Department's projects also provide a range of employment and service delivery opportunities that can provide benefits to First Nations. For more information about these visit the [DEW Reconciliation Portal](#).

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Agreement-making and Protocols

There are many established agreements and protocols between First Nations and either DEW and or the SA Government that need to be considered as part of your engagement. Contact your regions respective First Nations Partnerships Officer to find out what may be in place in your project area.

A number of existing arrangements can be found in the [Library of First Nations Engagement tools](#).

Where these do not exist, projects that plan to *collaborate, partner / co-design* with, or *empower* First Nations peoples may benefit from an Agreement or Protocol making process with First Nations to define and guide the engagement process.

Agreements and Protocols are particularly useful for medium to long-term partnerships and in different regions are supported by ongoing resourced First Nations liaison / coordinator roles.

These documents act as key *risk controls* for your proposals and may outline:

- Past, present and future matters of importance to First Nations
- First Nations and the Department's interests in the proposal
- Key points of contact
- Respective governance and decision making structures
- Mutually agreed actions and working arrangements between the parties
- First Nations knowledge protection clause and definitions
- Provide a strong foundation for DEW's partners and other agencies to coordinate engagement with the respective First Nation.

The process of negotiating an Agreement or Protocol is beneficial for relationship building, supports Leaders from both parties to meet and supports a mutual understanding of the proposal. **Projects need to allocate resources to support the development of these documents (See Appendix 3 for budget considerations).**

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Engagement Strategy

The project's engagement strategy is a living document that should remain open to change. It is recommended that these are started with the guidance of First Nations Partnerships Officers, and further developed in partnership with the respective First Nations Peoples.

Once you have determined who you need to engage, existing commitments in place and your engagement method you think is most appropriate, the [DEW engagement strategy template](#) can be used to draft your project's engagement strategy.^{iv}

Looking for opportunities to coordinate engagement

The pressures on First Nations to participate in engagement processes is constantly increasing and engagement fatigue is common. In addition to considering the timing of your engagement and avoiding clashes with other engagement work, look across the Department and Government to see if there are opportunities to join-up with other processes that are occurring with the same First Nation, in the same period or geographical area of your planned engagement.

Consider these points when looking for opportunities to coordinate engagement:

- Is there a potential cross-over with any other engagement processes occurring around the same time?
- Is the government currently engaging with this First Nation or collective organisation on any other matters?
- Has the Department or Government engaged recently on this issue or with the same First Nations, and what was the result?
- Is there an opportunity to coordinate your engagement?
- How can we maximise this opportunity for involvement and meaningful engagement?

Ensure you have familiarised yourself with outcomes from engagement on previous policies, programs and projects. While reading and understanding this documentation can never replace the need to engage with a First Nation, it will certainly make the process easier for both sides, and it shows respect for and understanding for the responsibility and advice of elders or other spokespeople for a First Nation.

Timeframes

It is important to go to First Nations with initial thinking / proposals rather than a fully formed or fixed view. Engaging during the project 'Concept' phase is recommended.

The strategy needs to ensure sufficient time for people to engage effectively. This includes the time for community to have their own discussions about the proposal. Seek input early and not too late in the policy and planning development process. Keep timeframes as flexible as possible to allow for unexpected situations.

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Embed First Nations engagement in the identification and analysis of project risks (Project Concept and Feasibility stages; and for water related planning during the risk assessment phase using the DEW Risk Management Framework for Water Planning and Management).

Resourcing

Effective First Nations engagement needs resourcing. Project teams need to consider the capacity of First Nations to participate in your engagement process and be mindful that First Nation representative organisations deal with multiple issues and agencies simultaneously. Their members generally work on a voluntary basis.

A table of budget considerations that may be relevant to your project is provided at **Appendix 3** for information purposes (costs and rates need to be confirmed by project teams).

Proposals to *inform* may require resourcing to support translation and venue.

Proposals to *consult* with First Nations may need to consider resourcing to support people's attendance at meetings or presentations and / or to provide feedback.

Proposals to *collaborate, partner/co-design and empower* require budget for First Nations to engage. Engagement that supports First Nations employment and organisational capacity generally have greater impact and effectiveness. This type of approach aligns with the Department's Reconciliation Action Plan vision 'First Nations peoples taking a leading role in caring for Country'.

Venue and creating culturally safe spaces

Seeking the advice from First Nations peoples on an appropriate venue for discussions is important to ensure accessibility, but also to creating a culturally safe place for people to participate. This includes ensuring people can freely participate or not if these choose to, information is provided in a form that is accessible and makes sense.

Risk assessment

The identification, analysis or assessment of risks informs much of the Department's work. It occurs early in the scoping / concept stages and also informs the core strategies of DEW's plans.

Engagement that commences after the risk assessment make it difficult for First Nations interests to influence the direction and agreed objectives of the proposal. Therefore this is a critical stage to ensure First Nations peoples are engaged.

Staff can consider the following points when engaging First Nations peoples in risk assessment:

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- Liaise early about the proposed risk assessment process as part of the proposal
- Recognise First Nations Plans, Protocols and Agreements as *risk controls*.
- Note the option for a specific risk category focussed on First Nations connection to Country

Embed the [policy and legislative settings for the Department's First Nations engagement](#) as part of setting the *context for the risk assessment*. More information about First Nations engagement is risk management can be found in **Appendix 4**.

Feedback and endorsement

At a minimum, First Nations engaged need to be informed of how their feedback has been translated into action and outcomes and seek their feedback on the process.

Feedback is respectful and is crucial to ensure a long-term relationship. Feedback should be informed by the scale of engagement and the degree of engagement.

Where First Nations interests or knowledge have been incorporated into a plan or policy it is essential that prior to finalisation, drafts are provided back to the respective First Nations representative organisation for endorsement and consent to publish.

Projects that require formal advice and or endorsement by a representative organisation need to consider allocating funding to secure time on the organisations meeting agendas (see Appendix 3).

Knowledge storage and availability

Long-term storage of information generated from projects is an important consideration. The Department and First Nations partners have utilised Envirodata to store and enable access to project related information, protocols and plans. The [Ngarrindjeri Yarlumar-Ruwe page on Envirodata](#) demonstrates the option and value of this approach.

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Good practice engagement tips

The most effective engagement starts in the concept / scoping stage and utilises a series of discussions between project staff and First Nations.

While your approach to engagement will be developed in collaboration with your respective First Nations Partnerships Officer and First Nations peoples you are engaging, the following points may assist in developing a respectful and effective approach:

- First Nations are diverse and although there are shared values there are also differences
- Applying and communicating the procedure for Cultural Knowledge protection
- Country-based approaches (using the extent of the First Nations Country – or interests) may have the most meaning to First Nations
- On-Country planning – being on the lands and waters of the planning area
- First Nations have broad interests and should not be restricted as ‘Traditional’ or ‘Cultural’
- Support for across generation and gendered representation
- Providing time for closed sessions for First Nations to deliberate
- Support group or individual approaches defined by the group
- Resources to support First Nation representative organisations to co-develop the content using their own staff or members.
- Bringing in a respected facilitator if supported by the First Nations you are working with.^v

Staff need to be aware of a range of issues during engagement including:

- Elders are to be acknowledged and respected at all times
- The use of technical / specialised words are to be avoided
- Existence of gendered and restricted knowledge
- Don’t fill the silence... people may want to think or talk among themselves.
- No response doesn’t mean nothing – maybe the information can’t be shared
- Understanding that First Nations peoples may be speaking from multiple perspectives (human and non-human) and times (past, present, future)
- First Nations peoples are not expected to share Cultural Knowledge or their values during an engagement process – but supported to respectfully apply their knowledge to the process

Relationships and process are critical when engaging with First Nations peoples. Contact your respective First Nations Partnerships Officer now to support your First Nations engagement needs.

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Appendix 1 – Engagement approach

Once you have read the guideline we recommend contacting your respective First Nations Partnerships Officer to start designing your engagement approach. **Start the process together so you get on the right track.**^{vi}

There is a diverse array of First Nations organisations that DEW needs to consider in our work. Your engagement approach depends on the scale of your work but may include both inclusive and exclusive engagement.

Inclusive engagement on all plans, projects and activities they have an interest in as part of broader community engagement. Additional focus on First Nations economic participation. These will be for general initiatives, state-wide planning and programs. This includes **Aboriginal businesses and community controlled groups** (broader community, Aboriginal community council, Aboriginal owned businesses and peak bodies).

Exclusive engagement where the project focusses on a specific geographical area:

- **Formal recognition has been agreed** (Registered Native Title Prescribed Body Corporates (RNTPBC) where recognition agreed under Native Title Act 1993 (Cwth); APY Land Rights Act, 1981; MT Land Rights Act, 1984; Aboriginal Lands Trust Act, 2013; Recognised Aboriginal Representative Body (RARB) under the Aboriginal Heritage Act, 1988; and, via agreement with the Crown (Kungun Ngarrindjeri Yunnan Agreement, 2009 and Narungga Buthera Agreement, 2018):
 - **Must engage exclusively** with First Nations as partners as per agreement. Access to and use of land, planning and management of parks and co-management, use of natural resources (including water) and First Nations cultural heritage
- **Threshold requirements have been met but negotiations have not concluded** (NT claimants – connection reports addressed threshold issues, but no agreement finalised):
 - **Must engage, and can engage exclusively** as potential future partners on matters that affect their native title and cultural heritage rights and interests
- **Traditional Ownership asserted but yet to be formally recognised** (gaps between NT claims, registered NT claims, First Nations formally acknowledged without an agreement, group asserts rights and interests over an area but not engaged in any formal recognition process):
 - **Must engage** on matters that may affect their native title and cultural heritage interests if no other group has exclusive recognition.

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Appendix 2 – Cultural heritage management

The Department has legislative responsibilities to protect First Nations cultural heritage under the Aboriginal Heritage Act, 1988. Projects that involve ground disturbance, altered water regimes, using fire and / or management planning can interact with cultural heritage. In these cases your project will need to consider a First Nations Heritage Risk Management element the notifiable act process if specified in an Indigenous Land Use Agreement before undertaking certain activities.

Proposals must start from a position of avoidance of impacts to cultural heritage. This can be done by identifying and assessing the feasibility of different siting alternatives or an alternative design with the respective First Nation.

If your project includes these sorts of activities the project team may need to allocate sufficient time and resources to:

- Searching the [Aboriginal Heritage Register](#) through DPC – AAR to determine if any registered or reported heritage sites are in your planning area
- Designing a First Nations Heritage Risk Management Strategy – see [Heritage Fact Sheet](#)
- Undertake the notifiable act process if required by the ILUA
- Submitting an application for approval to fund the First Nations Heritage Risk Management activities via the Attorney General’s Guidelines for Aboriginal Heritage Payments. (a month should be set aside for seeking concurrence – approval).

If avoidance is not possible sections of the Aboriginal Heritage Act may need to be enacted. This process has significant time implications (**upwards of 3 months**). Comprehensive guidance is provided in the [DEW Aboriginal Heritage Strategy](#).

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Appendix 4 – Risk Assessment

Risk assessments underpin the Department’s core strategies. Projects must consider First Nations engagement in the risk assessment process, and recognise First Nations Plans, Protocols and Agreements identified above as *risk controls*.

Engagement that commences after the risk assessment make it difficult for First Nations interests to influence the direction and agreed objectives of the proposal.

Recommendations to adapt the DEW Risk Management Framework for Water Planning and Management propose a specific risk category for First Nations Connection to Country. This is a standalone risk category for First Nations to speak to that focusses on risks to:

- First Nations and Country past, present and future
- the relationship between First Nations and their Country
- the relationship between the State and First Nations, including:
 - damaging or losing First Nations partnerships / knowledge unique to Australia.

This new risk category sits between the standard ‘risk to the resource’ and ‘risks to community values’. It provides a connection for First Nations values and interests to be respectfully incorporated into the risk assessment.

Consider these points when planning to engage First Nations in risk assessment:

- liaise early about the proposed risk assessment process as part of the proposal
- note the option for a specific risk category focussed on First Nations connection to Country
- embed the [policy and legislative settings for the Department’s First Nations engagement](#) as part of setting the *context for the risk assessment*
- review existing First Nations Plans, Agreements, Protocols – consider these as *risk controls*
- provide for an initial workshop for the First Nation to consider and frame the risk categories and potential sources of risk relevant to them. A discussion about a possible risk pathway (consequence, source, control) that is relevant is a useful step.
- May need to work on a process of articulating goals, objectives. Some Nations have done this already and therefore can step into a risk assessment process much easier. Different levels of capacity and preparedness

Description of risk categories recommended for the DEW Risk Management Framework for Water Planning and Management relating to risks to First Nations Connection to Country is described below:

Risk Assessment	Categories of risk	Sources of risk
Risk to the resource	<ul style="list-style-type: none"> • Adverse water quantity/rate/availability • Adverse water quality (including salinity) • Poor health of water dependent ecosystem 	<ul style="list-style-type: none"> • Climate change / variability • Drought, fire, flood • Feral animals and plants • Interception • Land management practices

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Risks to First Nations connection to Country	<ul style="list-style-type: none"> • Possible provide Ngarrindjeri Yannarumi – high level examples here 	<ul style="list-style-type: none"> • CSIRO paper presents some specific risk pathways as examples.
Risks to community values	<ul style="list-style-type: none"> • Economic development curtailed (irrigation and other industry) • Water for human consumption • Community amenity degraded • Recreational opportunities e.g. fishing • Water for spiritual/cultural or religious us 	<ul style="list-style-type: none"> • As above plus: • Adverse water quality • Unsustainable levels of take • Inefficient use • Lack of cooperation or understanding by government • Location of taking or using water

ⁱ Free, prior and informed consent

First Nations peoples' right to free, prior and informed consent (FPIC) has been recognised by a number of intergovernmental organisations, international bodies, conventions and international human rights law in varying degrees. In Australia, as a signatory to the [UN Declaration on the Rights of Indigenous People](#), jurisdictions have a duty to consult with First Nations peoples and the goal of consultations should be to obtain their FPIC, where:

- 'free' implies no coercion, intimidation or manipulation
- 'prior' implies that consent is obtained in advance of the activity associated with the decision being made, and includes the time necessary to allow First Nations peoples to undertake their own decision-making processes
- 'informed' implies that First Nations peoples have been provided all information relating to the activity and that that information is objective, accurate and presented in a manner and form understandable to First Nations peoples
- 'consent' implies that First Nations peoples have agreed to the activity that is the subject of the relevant decision, which may also be subject to conditions.

In Australia, FPIC does not extend the right to be consulted or consent to be received to also include a veto power for Aboriginal and Torres Strait Islander peoples.

ⁱⁱ Insert a case study in a text box – the Ngarrindjeri Water Planning SOC is a good example.

ⁱⁱⁱ Highlighted approaches are preferred approaches to engagement, unless there is an overriding reason not too.

^{iv} Be aware that the template does not (yet) prompt you to put First Nations in a separate category from stakeholders. First Nation are not 'stakeholders'.

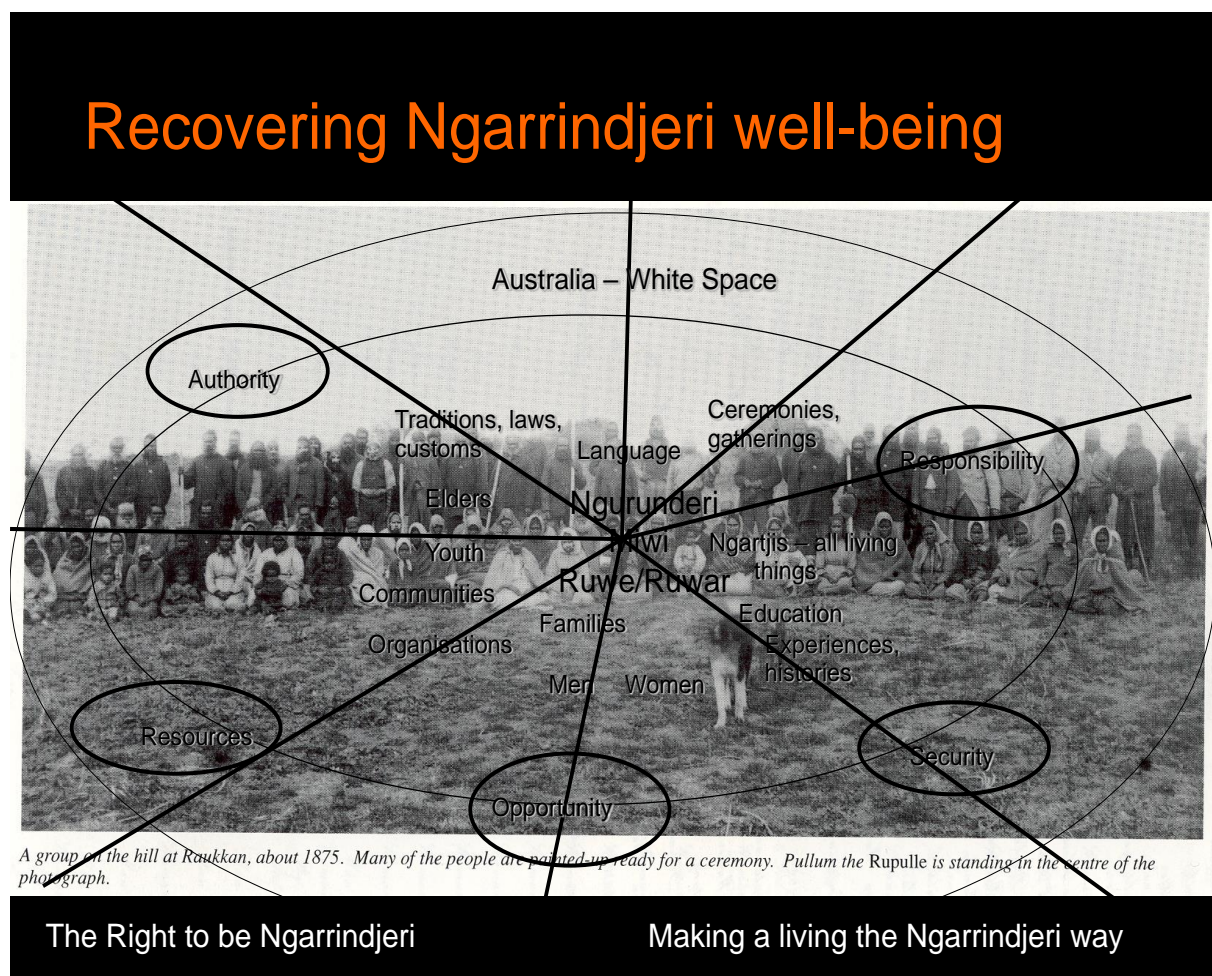
^v Include examples of where this has been done: CLLMM program, WRP work, Barossa WAP work, AW NRM Planning, wetlands and others.

^{vi} Make this point clear at the beginning - Start together, nothing about us without us

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Appendix 7: Recovering Ngarrindjeri wellbeing

This figure was developed as part of the 'Cultural and Economic value of water for Ngarrindjeri people', Water-For-A-healthy Country CSIRO Project (see Figure 9 in Birckhead et al. 2011, p. 28). 'Ngarrindjeri wellbeing and the weakened threads of authority, security, opportunity, resources and responsibility. This diagram has at its centre: *Ruwe/Ruwar* (land/body), the Creation Ancestor *Ngurunderi* and the overarching Ngarrindjeri concept of spirit and wellbeing *Miwi*. The lines moving out from the centre refer to the symbolism contained in Ngarrindjeri weaving' (Birckhead et al. 2011). This framework forms an important part of the Ngarrindjeri Yannarumi risk assessment process and an important Ngarrindjeri translation and connecting methodology.



Appendix 8: Ngarrindjeri Regional Authority Goals

Ngarrindjeri Regional Authority
Caring for our people, lands, waters and all living things

Building our nation
Securing our future

Goals

- Strong Culture
- Sovereign First Nation
- Secure Future
- Healthy Country
- Confident People
- Creative Economy
- Respected History
- Regional Leader

Working together for a strong, healthy and sovereign Ngarrindjeri nation
Honouring our People



Appendix 9: Water Resource Planning Statement of Commitment

Water Resource Planning (Murray-Darling Basin Plan)
Statement of Commitment

between the

Ngarrindjeri Regional Authority Incorporated

and the

Department of Environment, Water and Natural
Resources

South Australian Murray-Darling Basin Natural
Resources Management Board

South East Natural Resources Management Board

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Prepared jointly by:

The Water Resource Plan Statement of Commitment (WRP SOC) Working Group consisting of members from:

- Department of Environment, Water and Natural Resources
- Ngarrindjeri Regional Authority

Dedication

This Statement of Commitment is dedicated to all Ngarrindjeri Past, Present and Future.

Their respect for all living things within their Lands and Waters guides the development of this Statement of Commitment.

May their Spirits find rest and peace within their Lands and Waters.

This Statement of Commitment aims to respect Ngarrindjeri traditions, and rights and responsibilities according to Ngarrindjeri laws.

Parties

The Parties to this Statement of Commitment are the:

- Ngarrindjeri Regional Authority Incorporated (NRA)
- Department of Environment, Water and Natural Resources(DEWNR)
- South Australian Murray Darling Basin Natural Resources Management (SAMDB NRM) Board
- South East Natural Resources Management (SE NRM) Board

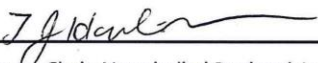
Statement of Commitment

The Parties intend this Statement of Commitment (SOC) to form part of the description of the consultation undertaken in relation to the preparation of water resource plans pursuant to section 10.07 of the Murray-Darling Basin Authority Basin Plan 2012 (Basin Plan) made under the *Water Act 2007* (Cth). The SOC commences on the date of signing by all Parties and will continue for the duration of the development and implementation of the relevant water resource plans or until the Parties agree to terminate the SOC or prepare another document that replaces this SOC or any Party notifies the other parties in writing that they wish to terminate the SOC. The Parties intend that a review of the document will occur two years from the date of signing.

Nothing in this SOC creates any legal right, liability or obligation with respect to DEWNR, SAMDB NRM Board, SE NRM Board, the NRA, the Minister for Water and the River Murray and the Minister for Sustainability, Environment and Conservation and the Crown in the right of South Australia (including, without limitation, any right, liability or obligation arising from common law, equity, contract, statute, misrepresentation, estoppel or legitimate expectation). The preceding clause forms a part of the terms of this SOC.


Signed for and on behalf of the Parties.

Ngarrindjeri Regional Authority Incorporated



Tim Hartman, Chair, Ngarrindjeri Regional Authority 31/7/2015

Department of Environment, Water and Natural Resources



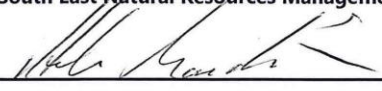
Sandy Pitcher, Chief Executive, DEWNR 31/7/2015

South Australian Murray-Darling Basin Natural Resources Management Board



Sharon Starick, Presiding Member 31/7/2015

South East Natural Resources Management Board



for Frank Brennan, Presiding Member 31/7/2015

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Guiding Statement

Ngarrindjeri have a unique philosophy regarding the connectivity of Ruwe/Ruwar (country/body/spirit). Ngarrindjeri Ruwe/Ruwar frames Ngarrindjeri rights and responsibilities as traditional owners and is centred on an understanding that all things are connected. As such, Ngarrindjeri view cultural heritage and natural resource management as inseparable.

The Parties acknowledge that the words 'traditional' and 'tradition' within this SOC relate to recognition of the lore, customs, culture, heritage and spiritual interests of the Ngarrindjeri People. 'Traditional' and/or 'tradition', as used throughout this SOC are not used in the same sense as in s. 223(1)(a) of the *Native Title Act 1993* (Cth).

Ngarrindjeri peoples have a long-term aspiration to be centrally involved in the development, planning and implementation of natural resources and cultural heritage management in their traditional lands and waters. These aspirations are acknowledged by the South Australian Government through the *Kungun Ngarrindjeri Yunnan Agreement 2009* (KNYA). These aspirations are also aligned with the State's responsibilities under the Basin Plan to identify both the objectives of Indigenous peoples in relation to managing the water resources within a water resource plan area and the outcomes for the management of the water resources within a water resource plan area that are desired by the relevant Indigenous peoples.

The Parties acknowledge that Ngarrindjeri hold a depth of Cultural Knowledge and understanding of their traditional lands and waters and that Ngarrindjeri custodianship has shaped the regions' ecological character over thousands of years. The Parties acknowledge the importance of collaboration for the effective development and implementation of the water resource plans within South Australia and the State and regional plans, strategies and policies linked to the water resource plans. The Ngarrindjeri Regional Authority (NRA), a peak body within the Ngarrindjeri community, has been formed for the purpose of coordinating activities and resources of the Ngarrindjeri community and high level interactions with the State. This SOC establishes an equitable framework to support appropriate engagement with NRA in the development and implementation of water resource plans within Ngarrindjeri traditional lands and waters in South Australia.

This agreement does not alter or negatively impact current agreements between the Ngarrindjeri and the Minister for Water and the River Murray, the Minister for Sustainability, Environment and Conservation, DEWNR, the SA MDB NRM Board and/or the SE NRM Board.

This agreement does not alter, supersede or negatively impact upon other Indigenous groups and their input into the management and use of the water resources within a water resource plan area.

Purpose

The SOC sets out the intentions of DEWNR, SE NRM Board, SAMDB NRM Board and the NRA in regard to Ngarrindjeri involvement in the development and implementation of water resource plans, and linked water planning and management activities within South Australia. The SOC intends to support the identification of NRA objectives and desired outcomes, while having regard to Indigenous values and uses with respect to the management of water resources within a water resource plan area as per the Basin Plan Chapter 10, Part 14. This approach aims to better acknowledge and value the Ngarrindjeri while respecting their traditional ownership and customary rights and responsibilities to care for country. This process is an important outcome of the KNYA and recognises Ngarrindjeri customary interests in water.

The SOC outlines a number of principles, outcomes, and activities that the Parties intend to utilise to support the participation of Ngarrindjeri in the development of water resource plans in their traditional lands and waters in South Australia. The document establishes mutual intentions for the initial development and implementation period of water resource plans. The Parties also intend to pursue outcomes that support a consistent and coordinated approach to Ngarrindjeri engagement in water planning across water resource plan areas within Ngarrindjeri traditional lands and waters and linked water planning and management activities.

The SOC does not commit funding from or to any of the Parties. The Parties intend to collaborate on identifying future funding sources to support the work outlined in the SOC.

Outcomes and progress of SOC implementation will be reported to all Parties and to the Murray-Darling Basin Authority as part of reporting on Basin Plan requirements.

The SOC aims to build upon existing relationships and engagement activities between the Parties in relation to water resource management. The Parties do not intend that existing working relationships between the Parties will be negatively affected by this SOC, but such relationships are expected to be enhanced by involving NRA in the development of water resource plans. The Parties agree to continued commitment of best practice procedures and the outcomes from this SOC.

Ngarrindjeri objectives and desired outcomes for the management of the water resources within and connected to Ngarrindjeri traditional lands and waters that are based upon social, spiritual and cultural values and uses of the water resource plan area are intended to inform the development and implementation of water resource plans. DEWNR, SE NRM Board and SAMDB NRM Board intend to maintain an ongoing dialogue with the NRA (as with other relevant Indigenous organisations in the WRP area) on the development and implementation of water resource plans to support the continuing consideration of Indigenous objectives and desired outcomes in water resource management. Having Ngarrindjeri express their connection to country will aid in the realisation of the benefits of caring for country and Ngarrindjeri well-being and improved water resource management in South Australia.

This SOC does not affect any native title rights or interests of the Ngarrindjeri or any other Aboriginal Group within South Australia.

CLLMM Ngarrindjeri Partnerships funding and service agreement

NRA's participation in the development and implementation of water resource plans is funded up to the end of June 2015 (and partially funded to the end of June 2016) through existing funding arrangements under the Ngarrindjeri Partnerships Project funding and service agreement between DEWNR and the NRA under the Australian Government and South Australian Government *Murray Futures* program, Coorong, Lower Lakes and Murray Mouth (CLLMM) project.

Ngarrindjeri Cultural Knowledge agreement

The Parties to this SOC have entered into a formal Cultural Knowledge agreement for the purpose of protecting and managing Ngarrindjeri Cultural Knowledge that may be disclosed as part of the implementation of the SOC. The agreement is between the NRA on behalf of the Ngarrindjeri and the Minister for Sustainability, Environment and Conservation and the Minister for Water and the River Murray for and on behalf of DEWNR, the SA MDB NRM Board and the SE NRM Board. The Cultural Knowledge agreement is for the duration of this SOC.

Geographic Scope

The geographic extent of the SOC will cover those portions of the three water resource plan areas that lie within the boundary of the Ngarrindjeri & Others Native Title Claim (SAD6027/1998) and may include views on connected water resources within the three water resource plan areas.

The geographic extent of the water resource plan areas in South Australia are indicated in Figure 1.

The geographic extent of the water resource plan areas within the Ngarrindjeri native title claim are indicated in Figure 2.

Figure 1 Water Resource Plan areas in South Australia

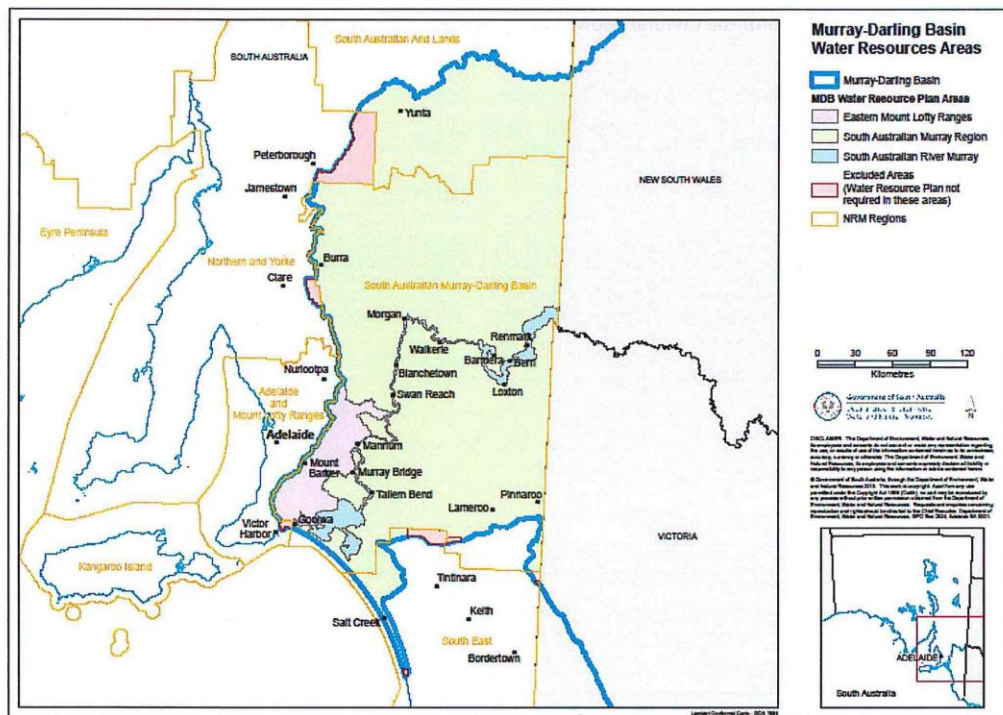
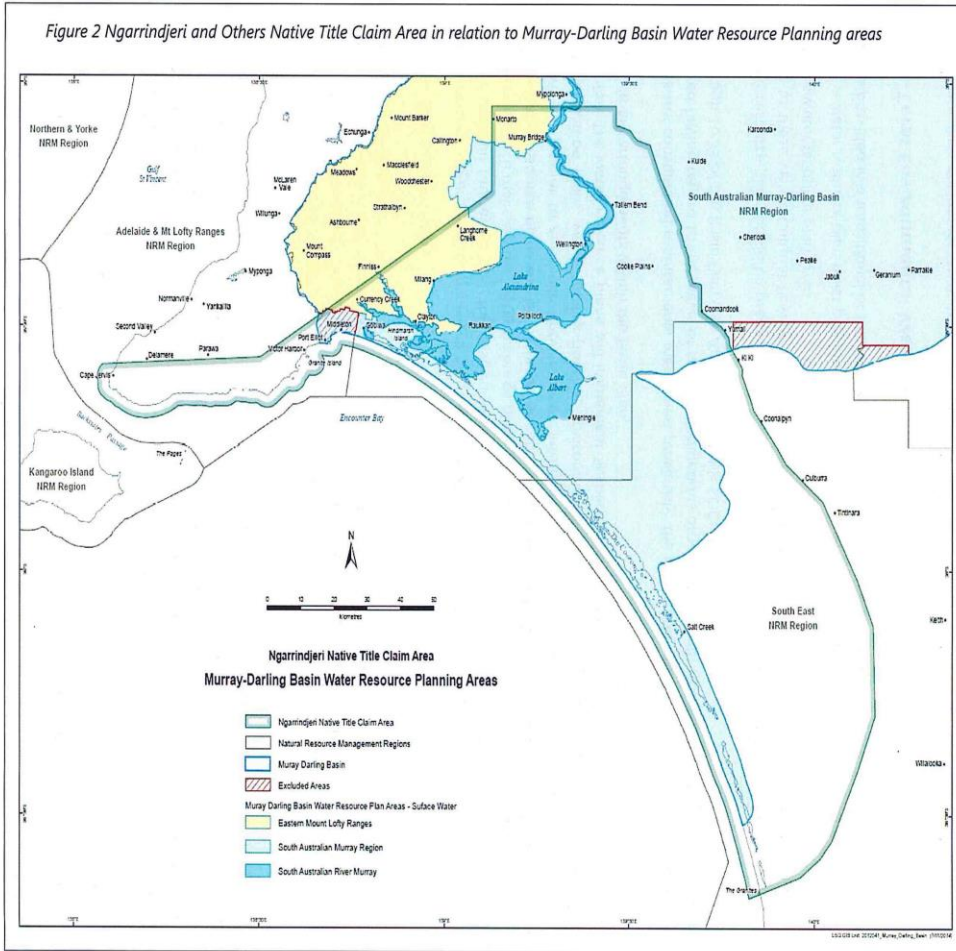


Figure 2 Ngarrindjeri and Others Native Title Claim Area in relation to Murray-Darling Basin Water Resource Planning areas



Context

Murray-Darling Basin Plan

The Basin Plan was adopted in November 2012 by the Australian Federal Government. The Basin Plan aims to return up to 3200 gigalitres (GL) of water to the River Murray and will help keep the Murray Mouth open, flush salt from the system, meet salinity and water quality targets to protect the Coorong, Lower Lakes and the river channel, and provide environmental flows to wetlands and floodplains. The Basin Plan guides the management of water across the Murray-Darling Basin in South Australia, New South Wales, Victoria, Queensland and the Australian Capital Territory.

South Australia has committed to ensuring water resources are managed consistently within the frameworks of the Basin Plan by advocating for, and implementing, water recovery projects, regional development initiatives, environmental works and measures, constraints management measures, and sustainable diversion limit (SDL) adjustment projects.

Water Resource Plans

Three separate water resource plans will be developed within South Australia to meet Basin Plan requirements. The South Australian Murray Region, the Eastern Mount Lofty Ranges and the South Australian River Murray are the three areas which make up the water resource plans and need to be in place by the end of 2019 (see figures 1 and 2). The water resource plans will be umbrella documents, and although their final scope is yet to be determined, they will likely point to and build upon relevant information from regional natural resource management plans, water allocation plans, water quality policies, environmental watering plans, policies, technical documents and legislation. The water resource plans will implement Sustainable Diversion Limits (SDLs) and other water resource management arrangements within the Basin Plan.

Besides the consultation requirements mentioned previously, the preparation of the water resource plans must be prepared having regard to the views of relevant Indigenous organisations with respect to those matters set out in paragraph 10.53 of the Basin Plan (see Appendix 1 of this SOC).

A water resource plan should be prepared in a way that elicits Indigenous Peoples views on cultural flows, and have regard to these views. Cultural flows may hold a different meaning to different Indigenous Peoples and Nations within a water resource plan area.

Finally, a water resource plan must provide at least the same level of protection of Indigenous values and uses as provided in a transitional or interim water resource plan (existing documents).

Long-Term Environmental Watering Plan

Three long-term environmental watering plans will be developed for water resource plan areas that contain surface water, either as separate documents or as part of a water resource plan. The long-term environmental watering plans will identify priority environmental assets and functions within each water resource plan area, ecological objectives and targets for those assets and functions, as well as the environmental water requirements (EWRs) to meet these objectives and targets. The plans must be developed consistently with a number of Basin Plan principles to be applied in environmental watering set out in Chapter 8 of the Basin Plan, including that environmental

watering will be undertaken in a way that maximises its benefits and effectiveness by having regard to Indigenous values.

Long-term environmental watering plans must be given to the Murray-Darling Basin Authority (Authority) 12 months after the publication of the Basin-wide environmental watering strategy¹ unless otherwise agreed to by the Authority and Basin State. The plans will be reviewed every five years, or one year after a water resource plan has been accredited.

DEWNR intends to continue to engage with the NRA on annual environmental watering priorities.

Kungun Ngarrindjeri Yunnan Agreement and Water Resource Planning

In 2009, the whole-of-government Kungun Ngarrindjeri Yunnan Agreement (KNYA) between the Ngarrindjeri and the South Australian Government was set in place to frame the Ngarrindjeri strategy for negotiating Ngarrindjeri interests in Natural Resource Management, and in particular the South Australian Government's *Securing the Future, Long-term Plan for the Coorong, Lower Lakes and Murray Mouth*. The KNYA provides for the establishment and funding of a joint taskforce that creates a formal negotiation setting for the NRA regarding South Australian Government programs on Ngarrindjeri *Ruwe/Ruwar*. The KNYA includes a recognition of Ngarrindjeri traditional ownership; and recognition of the NRA as the Ngarrindjeri peak body. The KNYA 2009 and the KNYA Taskforce have provided the primary Indigenous engagement mechanism for 'environmental' water planning in the SA MDB region.

The *KNYA Taskforce Strategic Implementation Plan*, co-written with DEWNR and endorsed in October 2014 outlines a number of objectives for the KNYA Taskforce to provide guidance on how it can support and implement positive outcomes². For this SOC, Objective 5 is of particular interest because of its relation to water planning and management.

Objective 5: Support coordinated and appropriate engagement with Ngarrindjeri on water related planning and management issues that affect the Ngarrindjeri Nation

A description of objective 5 states that the "Ngarrindjeri are inextricably connected to the fresh and saltwater of the Lower Murray, Lakes and Coorong. Water resource planning for this region and within the broader Murray-Darling Basin affect water quality and quantity flowing into Ngarrindjeri country"³. The document points out

¹ Basin Wide Environmental Watering Strategy was published on 24 November 2014 <http://www.mdba.gov.au/what-we-do/environmental-water/basin-watering-strategy>

² Kungun Ngarrindjeri Yunnan Agreement: Listening to Ngarrindjeri People talking, KNYA Taskforce Strategic Implementation Plan 2014, Government of South Australia DEWNR and Ngarrindjeri Regional Authority, 2014, p. 10

³ As above

that Ngarrindjeri are recognised as important partners in water resource management in the CLLMM region and have strong representation at the Murray-Darling Basin level through their delegates on the Murray, Lower Darling Indigenous Nations (MLDRIN) group. The Murray-Darling Basin Authority are progressively recognising the importance of acknowledging and considering Indigenous interests in water resource planning, particularly in regards to Cultural flows/water. The KNYA Taskforce can provide support to Commonwealth and State Government water resource planners in engaging Ngarrindjeri.

Principles

The following principles will guide this SOC:

1. This SOC is not legally binding on the Parties;
2. Mutually respectful processes, time and support to the NRA to care for country (caring for past, present and future people), including recognition of the importance of Ngarrindjeri to undertake their own research to inform their positions;
3. Mutually respectful processes, time and support to DEWNR staff to fulfil water resource plan related duties and requirements; and recognition that in developing water resource plans the State will have regard to the State's and the public interest
4. Shared resolve and commitment by each party to reach agreement and to implement the SOC's activities;
5. All Parties seek to further the objectives and outcomes of the plans and priorities they have participated in creating;
6. The development and implementation of water resource plans and long-term watering plans will have regard for NRA objectives and outcomes in respect to water resource management;
7. Ngarrindjeri Cultural Knowledge and intellectual property in relation to this SOC is protected under a separate agreement referred to in Section 2 ('Purpose') above;
8. A collaborative approach to care for water resources.

Working Relationship

The first meeting between DEWNR and the NRA to discuss water resource plans and the Basin Plan occurred at the KNYA Water Workshop on the 25-26 of February 2014. It was suggested at that meeting that a Statement of Commitment would be developed to guide the way the Parties will work together to deliver and implement water resource plans.

The Parties to this SOC agree to establish a Water Resource Planning SOC Working Group (Working Group) to implement the requirements of Chapter 10, Part 14 of the Basin Plan into South Australian water resource plans within Ngarrindjeri traditional lands and waters. The Working Group intends to meet as required to deliver joint SOC activities and will not have standing meeting dates. This arrangement aims to enable the Working Group meetings to undertake or coordinate targeted activities to assist in implementing the SOC. Working Group meetings will be jointly planned between the Parties' representatives and will consider regionally based meeting venues to ensure the right people are able to attend. The Parties intend to develop Terms of Reference, and an Annual Work Plan to guide the Working Group activities and Working Group meetings.

DEWNR intend to utilise the KNYA Taskforce to provide updates on implementation of the water resource plans. The Parties intend to utilise the Ngarrindjeri Yarluwar-Ruwe (NY-R) program group meetings to undertake water resource plan related consultation with the NRA. The KNYA Taskforce meetings are intended to be used to report updates on the status of the SOC implementation.

Working Group members propose to report regularly to their respective Parties regarding the status of achieving the outcomes of this SOC and Annual Work Plan.

The water resource plans will identify Ngarrindjeri objectives and desired outcomes, while having regard to Indigenous values and uses in relation to the management of the water resources in the relevant water resource plan areas. The identification will aid the development and implementation of Basin Plan compliant water resource plans and water resource management practices.

The Working Group meetings are intended to contribute to the identification of NRA objectives and desired outcomes of the management of the water resources within the relevant water resource plan areas.

The Parties propose to:

- Nominate representatives to participate in the water resource planning Working Group. Each Party will give the other Parties notice in writing (including by email) of its nominees from time to time.
- Develop an annual Work Plan to implement the SOC.
- Be responsible for the implementation of the activities specified in this SOC.
- Consider any other activities required for collaboration in planning.
- Monitor and evaluate progress against this SOC and any new activities developed through an annual review process.

Parties intend to work collaboratively to support Working Group meetings.

The Parties intend to build on existing engagement processes.

NRA Processes

NRA representatives taking part in meetings may undertake consultation of matters relevant to this SOC with the NY-R Program and if relevant, the broader Ngarrindjeri community. The NY-R Program will be responsible for endorsing NRA input to the consultation process before it comes to meetings.

Engagement and consultation will occur as required and may require flexibility in timing given cultural protocols and the availability of the relevant representatives. It is understood that Cultural Knowledge and the reasons behind specific NRA decisions may not be divulged.

Outcomes and Activities

The key outcomes and activities aim to meet the requirements of the Basin Plan and improve the management of the water resources within the water resource plan areas. The Parties acknowledge that there are also a number of intended outcomes and activities not required under the Basin Plan (including those intended to be carried out by the Working Group) and these have been listed separately. It is expected that further details of these outcomes and activities will be incorporated into the Working Group annual work plan.

The key outcomes of this SOC intended to contribute to meeting the requirements of the Basin Plan include:

- i. NRA representation in the development and implementation of the relevant water resource plans.
- ii. Identification of Ngarrindjeri objectives and outcomes in relation to management of the water resources of the water resource plan areas with regard to Ngarrindjeri cultural values and uses.
- iii. Identification of strategies for achieving above intended outcomes.
- iv. Acknowledgement of registered Aboriginal heritage relating to the water resources in the relevant water resource plan areas.
- v. Identification of risks to Ngarrindjeri values and uses from the use and management of the water resources of the water resource plan area.
- vi. Regard for Ngarrindjeri views on 'cultural flows' in the preparation of the relevant WRP.
- vii. Protection of Ngarrindjeri values and uses as documented in previous water allocation plans, or transitional or interim water resource plans for the relevant water resource plan area.

Intended outcomes of this SOC that are not required under the Basin Plan

- i. Establishment of a collaborative approach to seek opportunities to maintain and strengthen the protection of Ngarrindjeri values and uses in accordance with Ngarrindjeri objectives and desired outcomes for the water resources of the relevant water resource plan areas.
- ii. Joint consideration on how Ngarrindjeri objectives and desired outcomes for the management of the water resources may be identified in the relevant water resource plans.
- iii. Regard to social, spiritual and cultural values and the benefits that flow to Ngarrindjeri re-connection to country.
- iv. Progress toward increasing capacity-building opportunities and support for the maintenance and strengthening of current engagement and operational activities of the water resources in the relevant water resource plan areas.
- v. Progress toward a collaborative approach to care for water resources within the relevant water resource plan areas.
- vi. Increased awareness of mechanisms that could support Ngarrindjeri interests in water allocations and licencing.

The following arrangements are anticipated to apply to the establishment and operation of the Working Group:

- Parties each nominate representatives to participate in the Working Group.

- Establish the Working Group and associated governance arrangements (i.e. Terms of Reference and reporting arrangements).
- Develop Annual Work Plan for Working Group containing targeted activities to achieve SOC and Basin Plan outcomes.
- Utilise NY-R Program group meetings and KNYA Taskforce meetings for consultation.
- Schedule meetings between DEWNR and/or Natural Resources SAMDB and/or Natural Resources SE and NRA to identify and discuss possible integration of NRA cultural values and uses into water resource plans.

Appendix 2: Relevant Legislation, Plans and Reports

The following strategies, agreements, and plans may be relevant in achieving the intended outcomes and activities set out in the SOC:

1992, United Nations Convention on Biological Diversity.

1998, Ngarrindjeri perspectives on Ramsar Issues: Ngarrindjeri / Ramsar Working Group Report.

1999, Environmental Protection and Biodiversity Conservation Act (Cth).

2002, The Murray Mouth – Exploring the implications of closure or restricted flow.

2003, River Murray Act (SA).

2004, Intergovernmental Agreement on a National Water Initiative (Cth).

2004, Natural Resources Management Act (SA).

2006, Ngarrindjeri Yarlular-Ruwe Plan.

2006, Coorong and Lakes Albert and Alexandrina Ecological Character Description Report.

2006-2007, The Lower Lakes, Coorong and Murray Mouth Icon Site Environmental Management Plan.

2007, Murray Lower Darling Indigenous Nations Echuca Declaration.

2007, Water Act (Cth).

2008, Ngarrindjeri Regional Partnership Agreement.

2008, Economic and cultural values of water to the Ngarrindjeri people to the Lower Lakes, Coorong, and Murray Mouth.

2008, United Nations Declaration on the Rights of Indigenous Peoples.

2009, Kungun Ngarrindjeri Yunnan Agreement (NRA and South Australian Government).

2009, Securing the future, Long-term Plan for the Coorong, Lower Lakes and Murray Mouth.

2010, South East Natural Resources Management Plan.

2011, South Australia's Strategic Plan.

2012, CLLMM Ngarrindjeri Partnerships Funding and Service Agreement.

2012, Ngarrindjeri Regional Authority submission for and on behalf of the Ngarrindjeri people in relation to the proposed Murray-Darling Basin Plan.

2012, Murray-Darling Basin Plan (Cth).

2012, State Natural Resources Management Plan South Australia 2012-2017.

2013, Lower Lakes, Coorong and Murray Mouth Icon Site Environmental Water Management Plan.

2013, Murray-Darling Basin Plan: South Australian Implementation Strategy 2013-2019.

2014, River Murray Act Implementation Strategy (SA).

SAMDB NRM Board (2014a) *South Australian Murray-Darling Basin Natural Resources Management (SAMDB NRM) Plan, Volume A: Strategic Plan*, SAMDB NRM Board, Murray Bridge, South Australia.

SAMDB NRM Board (2014b), *South Australian Murray-Darling Basin Natural Resources Management (SAMDB NRM) Plan Volume B: Board Business and Operational Plan*, SAMDB NRM Board, Murray Bridge, South Australia.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). Review: Water Allocation Plan for the Noora Prescribed Wells Area. Berri, South Australia: SA MDB NRM Board, 2006.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). River Murray Water Allocation Plan Review June 2007. South Australia: SA MDB NRM Board, 2007.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). Water Allocation Plan for the Mallee Prescribed Wells Area. South Australia: SA MDB NRM Board, 2012.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). Water Allocation Plan for the Eastern Mount Lofty Ranges. South Australia: SA MDB NRM Board, 2013.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). Water Allocation Plan for the Marne Saunders Prescribed Water Resources Area. South Australia: SA MDB NRM Board, 2010.

South Australian Murray-Darling Basin Natural Resources Management Board (SA MDB NRM Board). Water Allocation Plan for the Peake, Roby and Sherlock Prescribed Wells area. South Australia: SA MDB NRM Board, 2011.

Appendix 10: Cultural Knowledge Agreement – Water Resource Planning

CULTURAL KNOWLEDGE AGREEMENT for the WATER RESOURCE PLANNING STATEMENT OF COMMITMENT

This Agreement is dated the 31 July 2015

BETWEEN:

**NGARRINDJERI REGIONAL AUTHORITY INC [ABN 50 034 502 372] ON BEHALF OF
THE NGARRINDJERI PEOPLE of 50 Princes Hwy, Murray Bridge East, SA
(NGARRINDJERI)**

-And-

**THE MINISTER FOR SUSTAINABILITY, ENVIRONMENT AND CONSERVATION AND
THE MINISTER FOR WATER AND THE RIVER MURRAY FOR AND ON BEHALF OF THE
CROWN IN RIGHT OF THE STATE OF SOUTH AUSTRALIA THROUGH THE
DEPARTMENT OF ENVIRONMENT, WATER AND NATURAL RESOURCES [ABN 36 702
093 234], THE SOUTH AUSTRALIAN MURRAY DARLING BASIN NATURAL RESOURCE
MANAGEMENT BOARD [ABN 14 305 414 800] AND THE SOUTH EAST NATURAL
RESOURCE MANAGEMENT BOARD [93 209 459 406] of 9th Floor Chesser House, 91 –
97 Grenfell Street Adelaide SA 5000 (MINISTERS)**

RECITAL

- A. The Ngarrindjeri People assert their presence and control as the Native Title Claimants to the land and waters located within the boundary of Claim SAD 6027/1998 being the Ngarrindjeri Native Title Claim as described therein (the Native Title Claim).
- B. The Ngarrindjeri People are the traditional owners (as that term is defined in the Aboriginal Heritage Act, 1988 (SA)) of Aboriginal Sites, Objects and Remains within the area of the Native Title Claim.
- C. The Ngarrindjeri People have created a peak body called the Ngarrindjeri Regional Authority Inc for the purpose of coordinating activities and resources of the Ngarrindjeri community and interactions with the State of South Australia.
- D. The Parties have entered into a statement of commitment (SOC) to outline the Parties' intentions in regard to the consultation to be undertaken by the Department in the preparation of water resource plans pursuant to the Murray-Darling Basin Authority Basin Plan (Basin Plan).
- E. The Ngarrindjeri and the Ministers wish to enter into a formal Cultural Knowledge agreement for the purpose of protecting and managing Ngarrindjeri Cultural Knowledge that may be divulged in the course of the consultation undertaken pursuant to the SOC.
- F. The agreement will remain in place for the duration of the SOC.

IT IS AGREED:

1. Definitions

'Agreement' refers to this Agreement and includes any schedules;

'Cultural Knowledge' means all and any cultural knowledge, including but not limited to:

- a) traditions, observances, customs or beliefs;
- b) songs, music, dances, stories, ceremonies, symbols, narratives and designs;
- c) languages;
- d) spiritual knowledge;
- e) traditional economies and resources management;
- f) scientific, spatial, agricultural, technical, biological and ecological knowledge;

and includes the manifestation of such Cultural Knowledge in any document or other forms of media including but not limited to archives, films, photographs, videotape or audiotape', which may also be subject to any Intellectual Property Rights owned by third parties in any such manifestation.

'Department' means the Department of Environment, Water and Natural Resources.

'Intellectual Property Rights' means:

- a) any copyright work or subject matter other than a work (including any work or subject matter other than a work created in the future), patentable invention, design, circuit layout, new plant variety, trademark, know-how or confidential information and any other intellectual property defined in Article 2 of the Convention Establishing the World Intellectual Property Organisation of July 1967; and
- b) any application or right to apply for registration of any of the rights referred to in subclause (a) above;
- c) but for the avoidance of doubt, excludes moral rights and performers' rights;

'Ministers' means the Minister for Environment, Sustainability and Conservation and the Minister for Water and the River Murray and includes any and all departments and instrumentalities of the South Australian Government that the Ministers are accountable for, or any of their agents, employees, officials or representatives.

'Parties' shall mean the Ngarrindjeri and the Minister through the Department, SAMDB NRM Board and SE NRM Board;

'Water Resource Planning Statement of Commitment (SOC)' means the statement of commitment signed by the Parties which outlines the Parties' intentions in regard to the consultation to be undertaken by the Department and the NRM Boards in the preparation of water resource plans pursuant to the Basin Plan.

2. Acknowledgement

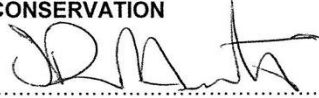
- 2.1 The Ministers also acknowledge and respect the rights, interests and obligations of Ngarrindjeri to speak and care for their traditional lands and waters in accordance with their laws, customs, beliefs and traditions.
- 2.2 The Ministers acknowledge that the Recitals referred to in the Background are true and correct.

3. Cultural Knowledge

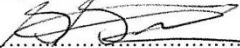
- 3.1 The Ngarrindjeri acknowledges and agrees that Cultural Knowledge does not constitute Intellectual Property Rights as such term is defined for the purpose of this Agreement.
- 3.2 The Ministers undertake that they will not collect or use Cultural Knowledge or knowingly divulge Cultural Knowledge in relation to consultation undertaken pursuant to the SOC or implementation of the water resource plans to any third parties without the prior written consent of Ngarrindjeri.
- 3.3 The Parties agree that any report, publication or plan resulting from the consultation undertaken pursuant to the SOC or the implementation of the water resource plans intended for public release to third parties shall be designated by the Ngarrindjeri as either a 'Category A Report' or a 'Category B Report', and thereafter the following shall apply:
 - 3.3.1 the publication of a Category A Report shall be unrestricted; and
 - 3.3.2 the publication of a Category B report shall be restricted to internal use of the Department only.
- 3.4 The Ngarrindjeri acknowledges and agrees that it shall not take any action against the Ministers in relation to the collection, use or divulgence of Cultural Knowledge if the status of the material as Cultural Knowledge has not been disclosed to the Ministers.

EXECUTED AS AN AGREEMENT BY:

Signed by the **MINISTER FOR SUSTAINABILITY, ENVIRONMENT AND CONSERVATION**


.....

In the presence of:

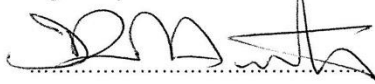

.....

Signature of witness

SHARON STARICK
Name of witness

31 July 2015
Date

Signed by the **MINISTER FOR WATER AND THE RIVER MURRAY**


.....

In the presence of:


.....

Signature of witness

Dr Helen Macdonald
Name of witness

31 July 2015
Date

Signed for and on behalf of the **NGARRINDJERI REGIONAL AUTHORITY INC**
by its duly authorised representative


Signature of authorised representative

Timothy HARTMAN
Name of authorised representative

In the presence of:


.....

Signature of witness

Dr Helen Macdonald
Name of witness

31 July 2015
Date

Appendix 11: Two way sharing, Workshop No.1



Two way sharing Workshop Translating Ngarrindjeri Yannarumi into water resource risk assessment project

Ngadlu tampinithi ngadlu Kaurna yartangka inparrinithi

(We acknowledge we meet on Kaurna land)

We would like to acknowledge this land that we meet on today is the traditional lands for Kaurna people and that we respect their spiritual relationship with their country. We also pay respects to the cultural authority of Aboriginal people attending from other areas of South Australia present here today.

We pay our respects to Ngarrindjeri Ancestors, Elders, leaders and young people.

We would like to warn people that this presentation contains images of Ngarrindjeri who have passed. May their Spirits find rest and peace as part of Ngarrindjeri Ruwe/Ruwar (lands, waters, spirits and all living things)

Chair: Lachlan Sutherland (DEW)

Meeting time:	10am to 3pm
Date:	Friday 26 October, 2018
Location:	Level 11, Boardrooms North and South, Flinders University, Tarndanyangga, Victoria Square.

Discussion item	Time	Lead
Arrival, registration and tea and coffee	10am	
1. Welcome and introductions	10.15am	All
2. <u>Goyder Project background</u> and purpose of the Two ways Workshop	10.20am	Assoc. Prof. Steve Hemming (FUSA)
3. Addressing a Basin-wide policy gap – Recognising Indigenous worldviews and interests in water resource risk assessment	10.30am	Lachlan Sutherland (DEW)
4. Ngarrindjeri Yannarumi session. Background to the process, existing Ngarrindjeri risk management toolbox and application through case studies: <ul style="list-style-type: none"> • Clayton Bay regulators • Swan Eggs • Kungun Ngarrindjeri Yunnan Agreement (KNYA) Taskforce 	10.45am	Prof. Daryle Rigney (FUSA) Grant Rigney (NRA) Assoc. Prof. Steve Hemming (FUSA)
Open question and answer time		
Lunch break	12pm	



5. DEW Water Resource Risk Assessment session. Background to the process and application through case study: <ul style="list-style-type: none"> River Murray Water Resource Plan Open question and answer time	12.30	Hugh Wilson (DEW) Noelle Overdeest (DEW)
6. Translation: discussing the space in between the frameworks, potential connections – differences and similarities – engagement versus conceptual – how to translate between the two. Group discussion on translation insights / opportunities and reporting back	1.30pm	Lachlan Sutherland (DEW)
Afternoon tea	2.10pm	
7. Translation opportunities applied to proposed CLLMM initiative(s)	2.20pm	Assoc. Professor Steve Hemming (FUSA)
8. Summary of key items raised and next steps	2.45pm	Prof. Daryle Rigney (FUSA)
Workshop close	3pm	

The Goyder Institute for Water Research is a partnership between the South Australian Government through the Department for Environment and Water, CSIRO, Flinders University, the University of Adelaide, the University of South Australia and The International Centre of Excellence in Water Resources Management. The Institute enhances the South Australian Government's capacity to develop and deliver science-based policy solutions in water management. It brings together the best scientists and researchers across Australia to provide expert and independent scientific advice to inform good government water policy and identify future threats and opportunities to water security.

Appendix 12: Testing draft methodology, Workshop No.2



Testing Draft Translating Methodology Workshop

Translating Ngarrindjeri Yannarumi into water resource risk assessment project

Ngadlu tampinhi ngadlu Kaurna yartangka inparrinhi

(We acknowledge we meet on Kaurna land)

We would like to acknowledge this land that we meet on today is the traditional lands for Kaurna people and that we respect their spiritual relationship with their country. We also pay respects to the cultural authority of Aboriginal people attending from other areas of South Australia present here today.

We pay our respects to Ngarrindjeri Ancestors, Elders, leaders and young people.

Meeting time:	10am to 3pm
Pre-reading:	Ngarrindjeri Report for Ramsar Working Group 1998
Date:	Monday 29 April, 2019
Location:	Flinders University, Tarndanyangga, Victoria Square. (Room TBC)

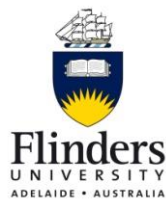
Discussion item	Time	Lead
Arrival, registration and tea and coffee	10am	
1. Welcome and introductions	10.10am	All
2. Ngarrindjeri Knowledge Agreement	10.15am	Daryle Rigney (FUSA)
3. Background <ul style="list-style-type: none"> a. Murray-Darling Basin Plan requirements b. Yannarumi assessments and water planning partnerships c. Goyder project aims and purpose of the workshop 	10.20am	Lachlan Sutherland (DEW) Grant Rigney (NRA / NAC) Steve Hemming (FUSA)
4. DEW Risk Assessment Framework for Water Planning and Management overview of the components	10.30am	Hugh Wilson / Noelle Overdeest (DEW)
5. Testing Draft Methodology on 'Management of Connected Water Resources' case study <ul style="list-style-type: none"> a. Our approach to applying the draft method b. Context 	10.40am	Facilitated by Hugh Wilson / Noelle Overdeest (DEW)
Morning tea break	11.30	



5. Testing Draft Methodology on 'Management of Connected Water Resources' case study continued:	11.45	Facilitated by Hugh Wilson / Noelle Overdeest (DEW)
c. Risk identification		
d. Risk analysis		
Lunch break	12.45pm	
5. Testing Draft Methodology on 'Management of Connected Water Resources' case study continued:	1.30pm	Facilitated by Hugh Wilson / Noelle Overdeest (DEW)
e. Risk evaluation		
f. Risk treatment		
Short break	2.30pm	
6. Participant insights	2.40pm	All
Close	3pm	

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