



## **Final report for circulation**

Citation:

Alexandra J., Spencer M., and Poelina A., *Kimberley water futures workshop - Exploring water governance in the Kimberley* November Broome 2015

### **Preface and document development methods**

It is our intention that this report accurately reflects the ideas at the workshop held in Broome on November 3, 2015. In this report on the workshop we aim to provide an accurate account of what was discussed and the views expressed, however, the authors take full responsibility for the views documented and therefor for any claims made or errors in fact. The processes used at the workshop were designed to ensure participants had many opportunities to express their views and any significant ideas of themes were distilled and fed back so that there were opportunities for further refinements. The authors have endeavoured to provide an accurate account of the matters identified as important at the workshop and where the views expressed at the workshop are supplement by material from the literature this is referenced. A comprehensive draft was sent to all participants and comments incorporated prior to finalisation. Based on this approach we are confident that we have captured the significant ideas expressed and hope that the process contributes to improved water governance. We gratefully acknowledge all who contributed their time, energy and ideas to improving water governance.

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## Executive summary

On November 3, 2015 a scoping workshop was held in Broome Western Australia (WA) to explore options for improving water governance in the Kimberley. As one of several case studies for an international scoping project on understanding ways to resolve land and water conflicts (partially funded by the French Pacific Fund - Fonds Pacifique), the workshop focused on investigating the potential of using the Water Stewardship<sup>1</sup> model as the basis for improving water governance.

The workshop initiated discussions on the potential of the water stewardship system and stronger participatory processes to contribute to developing agreed ways forward for managing water in Northern Australia. It focused on identifying issues and options for developing approaches to water stewardship in the Fitzroy River Basin, with the view that this could be used as a model for other river systems in northern Australia.

This document summarises the opportunities and challenges identified and charts possible future directions, including future research questions.

The workshop began by acknowledging elders past and present with a welcome to country provide by Linda Dolby Dean, a Yawuru Traditional Owner.

Over 20 people representing traditional owners, NGOs, researchers and community members gathered at the workshop to discuss how Kimberley people can have a deeper understanding and stronger voice in decisions about the future use and management of rivers and groundwater.

With increasing concerns about development activities and new proposals in the Fitzroy Valley and West Kimberley, the workshop was structured to provide an opportunity to identify constructive ways of achieving preferred water futures.

The workshop was broadly promoted in the regional media with an open invitation for interested parties to attend. The project team is committed to being inclusive inviting all interested parties to contribute via the workshop or in subsequent consultations with industry, Indigenous, government and environmental interests. The workshop identified that ongoing discussions and structured consultations would be enhanced by establishing a multi- stakeholder forum (see recommendation 1 below)

The workshop acknowledged that despite substantive research and community development efforts of recent years, there remains a pressing need to build capacity for participatory governance of water within the wider context of choices about desirable futures and appropriate economies. This demands integrated approaches to building and sustaining industries and communities, whilst also protecting cultural and natural heritage, including living waters and landscapes that make Northern Australia unique.

Enhancing water governance is recognised as a global challenge with the OECD arguing that most water related problems are a result of governance problems. There is a need to explicitly tackle the sources of these problems through focusing on enhancing capacity for

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<sup>1</sup> In this report water stewardship model and water stewardship system refers to the approach advocated by the Alliance for Water Stewardship (AWS) and Water Stewardship Australia (WSA). Definition of water stewardship is set out in the AWS International Water Stewardship Standard available from [www.allianceforwaterstewardship.org](http://www.allianceforwaterstewardship.org)

better governance (OECD 2015) and by working to develop better approaches to negotiating water agreements (Dore et al 2010).

*“Water governance is the set of rules, practices, and processes through which decisions for the management of water resources and services are taken and implemented, and decision-makers are held accountable. There is now an urgent need to take stock of recent experiences, identify good practices and develop practical tools to assist different levels of governments and other stakeholders in engaging effective, fair and sustainable water policies.”* (OECD 2015)

## Project findings

The workshop identified that:

1. There are widespread concerns about current and proposed development that have potential to impact on riverine and groundwater systems and their values.
2. These concerns include the potential ecological, economic and cultural impacts of energy, mineral and irrigation water extractions including possible impacts on ground water systems, water quality, changes to waterholes and dry season pools and impacts on Indigenous use and cultural values (see Harrington et al 2011).
3. There is support for actively investigating models/opportunities of economic development, including water based enterprises that are appropriate to the Kimberley and enhance livelihoods and lifestyles
4. There is also support for actively developing the Water Stewardship System which has the potential to bring together wide ranging interests in better water governance, including from commercial, community and environmental interests
5. More open consultative processes are required to build capacity and trust in water planning and governance processes
6. Given that ecological, material and cultural values of the riverine systems are inseparably intertwined it is not unreasonable to claim that all the water is already allocated and that any new extractive uses should be seen as a form of reallocation. As a result, more detailed studies into how value (in the broadest sense) is currently generated by the riverine systems (natural capital) are called for. Existing traditional and tourism uses need to be valued and possibly to be formally recognised as a form of water property right prior to allocation of new extractive water rights created by this reallocation.
7. There is a need to build both trust in and capacity for water planning through consultative and participatory processes.
8. Caution is required in issuing new extractive water licences. There appears to be no pressing reason to rush to issue new extractive water licences for a number of reasons – including that large volumes of irrigation water have been available in the Ord system for decades.
9. There remain many unresolved issues regarding the relationships between proposed new water rights and existing customary use and native title rights (Altman 2015). Lengthy legal proceedings could result if the native rights, heritage values and customary use are degraded by new extractive uses.

## Challenges, future directions and recommendations

The workshop identified a number of substantial challenges and supported more concerted efforts at formulating and advancing improved water governance models suited to the

region. Five main opportunities were identified and future directions endorsed. These are summarised below with more detail provided in the full report.

### **1. Establish a multi stakeholder forum**

There was strong support from the participants for the creation of a broad-based coalition of interests along the lines of the Fitzroy Catchment Management Group or FitzCAM, which was set up in the Fitzroy catchment in 2008 and ran for two years and assisted in developing catchment plan<sup>2</sup>. The proposed aim of developing a new multi stakeholder forum is to enable better engagement and consultation in water planning and governance and to further develop water governance and stewardship models suited to the Kimberley.

*Recommendation 1: A new multi stakeholder forum, involving industry, governments, community, Indigenous and environment interests should be established and resourced to provide strategic coordination, enable engagement and consultation and to further develop water planning, governance and stewardship models suitable to the Kimberley.*

### **2. Commit to conservation and management planning for the Fitzroy River**

There is little doubt about the conservation and cultural significance of the Fitzroy River system. Parts of the Fitzroy valley are under consideration for listing as RAMSAR wetlands, and the entire river (700 plus kilometres) was listed as national heritage in 2011 due to its conservation and heritage values.

The workshop endorsed further ongoing participatory planning for the Fitzroy River and its catchment. This planning needs to focus on consolidating, integrating and communicating knowledge; support further inventory and assessments work (as per TRACK and NES, NERF); integrate water and land use plans; assist in coordinating NRM, fire, pastoral and ranger programs; and develop and test methods of systematic conservation planning and water planning across large areas using existing data.

A key challenge is being able to bring together previously separate approaches - such as water and land resources planning, economic development planning, cultural assessments and bioregional or systematic conservation planning (Watson et al 2011).

There is no reason why these fields can't be successfully combined into holistic and systematic conservation planning for rivers and riverine ecosystems as more integrated planning methods and frameworks are emerging. Methods that are participatory, future orientated and empowering change would enhance planning and capacity for change (Pahl-Wostl 2007).

*Recommendation 2: There is a need for large scale, integrated planning for the Fitzroy River Basin that brings together economic development, cultural heritage, water and land resources, systematic conservation and catchment planning.*

### **3. Align water futures to appropriate economy and remote economic development**

Active consideration of preferred water futures and preferred water governance models are integral to the direction and successes of efforts to enhance remote economic/regional development.

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<sup>2</sup> <http://webadmin.communitycreative.com.au/uploads/rangelands/publications/Rangelands%20Fitz%20Mng%20Plan-Summary.pdf>

The workshop recognised that considerable work has been done in building a coalition of support for appropriate economic development in the Kimberley (Hill et al 2005) and for conceptualising the development of a conservation and cultural economy for northern Australia (see Hill et al 2008). Building on this foundation, the workshop identified the need to reconceive remoteness as opportunity and develop new models of remote area economic development, for example seeking opportunities based on building capacity and expertise for remote area food, health, energy and water systems.

The workshop also identified the need to focus policies and programs on developing better livelihoods and lifestyles, including through ensuring high quality Water and Sanitation Hygiene (WASH) services and through focusing on ensuring integrated solutions – health, nutrition, education, resources, employment, resilient food systems. Attempts to address remote disadvantage need to celebrate and build on successful cultural and hybrid economy models including existing tourism and other cultural and environment based businesses that could formally become branded as Water Stewards. This would include focusing more on understanding how the existing hybrid economy depends on and uses living waters and identifying opportunities for growing this (Jackson and Altman 2009). Further studies on the ways in which water systems currently generate cultural and economic value were called for.

*Recommendation 4: Building capacity for participatory governance of water should be recognised as part of the ways in which desirable futures and appropriate economies will be developed. Integrated approaches to building and sustaining industries and viable communities are required that protect cultural and natural heritage, including living waters and landscapes. Further studies on the ways in which the water systems generate cultural and economic value are required as the basis of understanding how to generate further non-destructive value from these.*

#### **4. Clarify legal and property rights related to native title and customary use**

The workshop identified the need to clarify legal and property rights relationships between statutory water rights and existing rights established by native title and customary use. Studies by Jackson and Altman (2009) draw attention to this need across northern Australia.

There is a need to better understand existing use (eg fisheries and tourism) and cultural values (Indigenous and non Indigenous) in order to assess relationship between potential hydrological impacts of proposed developments and how these could impact on economic, ecological and cultural and material values of the riverine and estuarine systems, including those linked to ground water.

*Recommendation 4: There is a clear need for concerted effort to clarify legal and property rights relationships between statutory water rights and existing rights established by native title and customary use and to better understand existing values that may be impacted by any planned changes to riverine ecosystems and water use regimes.*

#### **5. Enhance capacity for supply chain and other linkages**

Effective water governance requires ways of managing the commons in an era of global supply chains. Therefore it is desirable to further develop and enhance local, regional and international linkages and networks that strengthen accountability and the transfer of better practice models. In particular, the workshop identified that there is an opportunity to

establish a network of water stewards in business and communities. Further work is required to develop this network, and to promote a regional identity and further develop iconic “Kimberley branding” as water sensitive. In the longer term, the networks would aim to achieve a self-funding through brand recognition and through providing supply chain rewards for good water stewardship.

The water stewardship system was identified as a way of strengthening linkages across commerce, primary industry and community stakeholders and along supply chains. It provides an opportunity to reward businesses willing to adopt best practice and has the potential to provide market based incentives. Therefore further investigations of the potential of using the Water Stewardship model as the basis for improving water governance are warranted.

*Recommendation 5: Opportunities to further develop the water stewardship approach as a framework for guiding better governance in northern Australia across industry, community and government stakeholders should be actively supported through a range of regionally focused pilot projects.*

### Research questions identified

As a scoping project part of the purpose is to identify important research questions. The following questions were identified but not prioritised:

1. How do statutory extractive water and mineral rights relate to native title rights and customary use that are dependent on healthy waterways?
2. What are safe level to set extractions? How should these be set? How are risks and uncertainty addressed in the planning processes?
3. Should new extractive rights be issued in small stages? If so could enterprise be grown in staged ways and impacts (+-) monitored as a condition of water use rights?
4. How can/will impacts/critical thresholds or matters of concern be predicted, assessed and monitored?
5. How much and what kinds of irrigation and irrigated crops are best suited to the conditions in the Kimberley?
6. What kinds of existing or new crops are suited to the conditions and will provide opportunities for employment and enterprise development?
7. Are there unique opportunities in producing unique bush foods and other products, marketed with distinct regional branding?
8. In the face of proposed irrigation and mineral developments that intersect with and modify ground water systems are there critical base line knowledge and information systems that should be gathered ASAP?
9. What are the ways in which fossil fuel (oil and gas) extraction will intersect with surface waters, shallow and deeper ground water and related aquifers?

10. What are the desirable forms of economic development most suited to the conditions? And how can these be facilitated and enhanced?
11. What is the role of water, including new water using and water impacting developments (and water governance arrangements) in appropriate economic development for remote areas of northern Australia?
12. How can complex, interrelated cultural and ecological values be understood and adequately represented in planning models and governance frameworks?
13. What models best meet economic development needs of remote regions whilst also protecting ecological and cultural values? How can their development be enabled?
14. How can existing communities and industries (eg tourism and pastoralism) that depend on water and environments be engaged in water stewardship models?
15. How can the iconic Kimberley Brand be developed, utilised and protected?
16. How can the water stewardship approach be used to support the development of more water and culturally sensitive and profitable commercial enterprises suited to the conditions in the Kimberley?
17. Can a clear set of 'shared catchment challenges' be developed for the Fitzroy Valley or sets of challenges for different parts of the Valley?

## 1. Introduction

Living waters are a defining feature of the landscapes of the Kimberley and other regions across northern Australia, central to peoples' lifestyles and livelihoods. They already support major industries like tourism and fisheries and provide immeasurable value to communities, sustaining them materially and culturally in what is sometimes described as a hybrid economy (Jackson and Altman 2009).

In short, sustaining healthy waterways and the cultural and economic values they support is central to effective water governance.

With growing community concern about the future of waters in the Kimberley a workshop was organised to explore stakeholder's views about the nature of the challenges and on identifying opportunities to improve water governance.

This document outlines findings from the workshop, in combination with project research conducted throughout 2015, on developing ways to improve water governance in the Kimberley.

A synthesis of the project findings that led to the recommendations and the R&D questions identified are provided in the next two sections. For those who want to find out more about the project background and the workshop the following sections and attachments provide more detail.

This reports documents the findings of this scoping project and is structured in the following way.

The main document has the following sections:

- Section 2 provide a detailed synthesis and discussion on major findings
- Section 3 outlines the project's origins, background and purpose
- Section 4 provides the Workshop Findings on future needs and opportunities
- Section 5 lists the R&D question identified

Attachments are as numbered:

1. Workshop background paper
2. Workshop agenda
3. List of attendees
4. Breakout group notes
5. Media before and after workshop.

Note copies of the PowerPoint presentations can be provided as separate files because these are too big to provide within this document.

## 2 – Major opportunities identified and their policy context

### 2.1 Australia’s water policy reforms

In the Water Reform Agreement of 1994, and the National Water Initiative (NWI) of 2004, Australian Governments committed to greater economic rigour and ecological accountability, aiming for micro-economic reforms, like water markets, and broader environmental sustainability goals (COAG 1994; COAG 2004). These historic agreements provided reform architecture for modernising the public-sector institutions that controlled water management. They oblige governments to adopt integrated catchment management and more consultative approaches to water allocation planning, including to recognise Indigenous interests in water. Despite the formality of these intergovernmental agreements (COAG 1994 & 2004), water reforms have been expensive<sup>3</sup>, difficult to implement and heavily contested.

Australia’s NWI water reforms are complex, multi-layered national policy with many fundamental tensions due to conflicting values, rationalities and imperatives (Hussey and Dovers 2009). Whilst recognising that these would need to be resolved throughout the implementation stages, they claim that the inherent tensions are unlikely to be resolved adequately by shifting responsibility to poorly resourced administrative scales of water resource planning.

Jackson and Altman (2009) describe the way in which the NWI aimed to ensure recognition of Indigenous interests in water, but identify significant impediments because Indigenous Australians “face a range of water-related challenges as they seek to engage in water reforms and emerging water institutions and mechanisms such as water planning”.

Cruse et al (2009) argue that powerful vested interests subverted the policies’ intent with outright rent seeking by promoting public funding for multi-billion dollar infrastructure, that primarily benefits irrigators, engineers and water managers. Connell (2011 & 2014) asserts that self-interested groups redefined conceptual frameworks and modified fundamental reform principles to reshape debates and ultimately key decisions. Multi-billion dollar Government subsidies flowed to the rural water sector demonstrating the irrigation lobby’s political influence and ability to capture natural and financial resources (Marshall 2015) contradicting the NWI and COAG Agreements’ stated commitments to economically rational policies based on user-pays and full cost recovery principles (COAG 1994; COAG 2004). With billions of taxpayers’ dollars allocated to water saving infrastructure, drought proofing and hydro-economic development sponsored by governments appears alive and well, despite over fifty years of rational economic critiques (Davidson 1966).

These interpretations align with overseas studies highlighting the water sector’s ability to appropriate reforms, whilst retaining construction and “command-and-control” approaches (Mollinga and Bolding 2004 in Molle et al 2009).

It is also claimed that Australia’s reforms are a moderate form of neoliberalism incorporating distributive justice (Edwards 2015). But Australia’s water reforms have largely failed to address equity and justice considerations in the treatment of Indigenous Peoples’ and their claims to cultural or economic water rights (Jackson and Altman 2009). This is a missed

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<sup>3</sup> \$13 billion of Commonwealth funds mostly for Murray Darling reforms and the economic cost of desalination plants estimated by author at over \$50 billion.

opportunity to reform laws to redress inequities, recognise Indigenous ownership or grant serious quantities of water to Indigenous peoples (Jackson and Langton 2010) despite the clarification of property rights and recognition of Indigenous interests being central tenants of the NWI reforms (COAG 1995 & 2005) and the Commonwealth Water Act (2009).

Describing both Indigenous disadvantage and water reform as wicked problems, the Australian Public Service Commission (APSC 2007) raises significant questions about governments' ability to deliver complex, public interest reforms. "Wicked problems" may be another term for systemic failures that are symptomatic of a deeper malaise of governments (Dovers 1996) chronically infected with new-public management and economic rationalism (Pussey 1991). However, massive government subsidies for irrigation infrastructure (Cruse 2009) and new irrigation development proposed for northern Australia (Rayner 2015) suggest that Australian water policy is immune or resistant to stringent economic rationalism and does not conform to simplistic arguments about the dominance of neoliberal, small government ideologies.

Australia water reform agenda has mostly focused policy attention and billions of dollars on attempting to rebalance the over-allocated of the rivers of Southern Australia, including the Murray Darling Basin (Marshall 2015).

Water policy is continuing to evolve in northern Australia. A number of the issues identified at the workshop are central to this evolution, including those relating to catchment and conservation planning and the appropriate recognition of Indigenous interests in water as outlined below.

## **2.2 Climate change and adaptive water governance**

The workshop supported the need for building capacity and institutions to support adaptive governance. More flexible and adaptive water governance is required to deal with a range of complex evolving water policy challenges both internationally (Pahl-Wostl 2007) and in Australia, including climate change (Alexandra and Donaldson 2012).

The global hydrological cycle distributes the majority of climate change impacts with more severe droughts in mid-latitudes and the intensification of tropical monsoons introducing profound uncertainties for water, agriculture and natural resource managers (IPCC 2012).

The popular understanding of climate change may be fundamentally changing policy debates and policy choices, with an increasing emphasis on food, energy and water security dominating international policy discussions (Allouche et al 2015). Predictions about increasing global food and water scarcity are being used to justify the expansion of intensive agriculture, including in northern Australia.

Australia implemented water policy reforms during the Millennium drought between 1998 and 2010 (CSIRO 2010 & 2012), while concerns about climate vulnerability escalated (Hayman and Rickards 2012). Water insecurity was used as justification for water saving infrastructure (Cruse 2009) and the construction of "climate-resilient" desalination plants (Elmahdi & Hardy 2015) at great expense to urban water users (Ferguson 2014).

Climate change alters the conceptual, political and physical geographies of water, ending stationarity and thus fundamentally altering hydrology and water resource planning (Milly et al 2008) requiring formulation of new adaptive approaches (Pahl-Wostl 2007) that rely less

on command and control approaches, emphasising the need for learning, complexity thinking, flexibility and adaptive capabilities (Alexandra 2012).

Sustainability imperatives demand that we improve innovation systems in order to deliver scalable solutions (Weaver et al 2000) whilst recognizing that “wicked problems” are immune to simplistic prescriptions, and thus require diligence in how solutions are conceived and executed, (APSC 2007). Better models of water governance are proposed as one of the solutions to the water crisis (OECD 2015).

Water governance intersects with a range of societal concerns, including disaster management, food and water security, resilient settlement patterns, and biodiversity conservation. With a wave of extinctions eroding the planet’s capacity to deliver ecosystem services (Millennium Ecosystem Assessment 2003) more rigorous vulnerability and risk assessment methods are called for. Management and science paradigms are required that can deliver capacity to understand and manage larger-scale socio-ecological systems respecting the way they are coupled and dynamic (Folke et al 2002). A changing climate and associated feedbacks could have a range of impacts requiring policy settings that balance disaster responsiveness and pre-emptive planning for climate driven events like droughts, cyclones and floods (Keim et al 2013; Alexandra 2012). Risk assessments need to be based on the best available science whilst also anticipating the potential for catastrophic shifts (Sheffer et al 2001) within linked economies and social systems (Folke et al 2002).

There is need to build greater capacity for integrated regional planning and capacity for comprehensive risks assessments (NLWRA 2002 b) including of the cumulative and synergistic risks that produce profound shifts in ecosystems (Sheffer 2009). Building increased regional capacity for water governance that attempts to manage rivers and their catchments for multiple outcomes is one approach to supporting anticipatory policy.

Capacity building is needed for deliberative governance, participatory management and social learning (Pahl-Wostl 2002; Walker et al 2002; Alston 2011, Wallis and Ison 2009). Adaptive governance arrangements are required that actively steer policy, govern systemic change and build capacity for transformations (Ryan et al 2010; Walker et al 2002; Folke et al 2002). Approaches to understanding and working skilfully with the dynamic social, economic and ecological systems are required.

The workshop endorsed the creation of a broad-based coalition of interests along the lines of the Fitzroy Catchment Management Group or FitzCAM, which was set up in the Fitzroy catchment in 2008 and ran for two years and assisted in developing a catchment plan<sup>4</sup>. The proposed aim of developing a new multi-stakeholder forum is to enable better engagement and consultation in water planning and governance and to further develop water governance and stewardship models suitable to the Kimberley.

*Recommendation 1: a new multi stakeholder forum, involving industry, governments, community, Indigenous and environment interests should be established and resourced to provide strategic coordination, enable engagement and consultation and to further develop water planning, governance and stewardship models suitable to the Kimberley.*

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<http://webadmin.communitycreative.com.au/uploads/rangelands/publications/Rangelands%20Fitz%20Mng%20Plan-Summary.pdf>

### 2.3 Water resource and catchment planning

Central to Australia's water policy settings, including the National Water Initiative (NWI) is water and catchment planning. The NWI specifies a number of requirements for regional water plans to be COAG compliance, including ensuring appropriate planning that is both ecologically and economically sound and involves communities in developing integrated plans (COAG 2004).

The workshop called for an increased focus on integrated catchment management (ICM) and processes that will support improved integrated planning.

The nature of the complex linkages between surface water and ground water systems was acknowledged, but accurate and trusted knowledge about the hydrology and hydro-ecology of the systems and the conservation and cultural values these system support constrains this planning.

People identified that there is much uncertainty about the nature of the potential risks due to the cumulative impacts of existing and proposed developments and the uncertainties about how the riverine systems actually interact with the groundwater, catchment and floodplain systems (Harrington et al 2011).

Furthermore, there is strong sense expressed that the riverine systems are intrinsically valuable, with the value linked to material, cultural and natural values. But there are substantial uncertainties about the system's dynamics and about the relationships between the hydrological and ecological processes and how these currently support economic and cultural values.

While this uncertainty should be treated with respect and further research undertaken, water governance regimes must evolve that are able to use available information and are robust under uncertainty. This is both due to climate change's impacts on hydrology (Milly et al 2008) and because with so many compounding changes more adaptive approaches are called for (Pahl-Wostl 2007). More data on hydrology, better climate science and methods like scenarios planning may be useful in planning to adapt to different futures.

With its focus on regional or catchment based water planning, the NWI shifted substantive responsibility for resolving complex policy issues to the domain of water planning. These embed the discipline of hydrology as the dominant discipline for both describing and solving the problem (Linton and Budd 2014). This depends on historic measurements of stream-flows and hydrological models run by water agencies that historically have had limited knowledge of floodplain and aquatic ecosystems and their water requirements, and almost minimal involvement in systematic conservation planning as a respected discipline (see for an overview Watson et al 2011).

More dynamic conservation paradigms are also needed. It is no longer appropriate to think in terms of attempting to conserve static ecosystems (Dunlop and Brown 2008). With the end of stationarity (Milly et al 2008) we need to develop better ways of doing water planning under uncertainty. More dynamic and flexible approaches to river catchments and bioregional planning including the use of stakeholder inclusive (multi-stakeholder) approaches, future scenarios and risk-based planning could be a powerful basis for exploring adaptive governance of natural resources if these process also empower people to conceive of and prepare for different futures (Rickards et al 2014; Alexandra 2012) because

unleashing imagination and creative capacity may be critical to enabling different and preferred futures (Alexandra and Riddington 2006).

The workshop used the four Principles of the Water Stewardship framework as a basis for discussion about 'Shared Catchment Challenges' as defined in Step 2 of the AWS Standard (AWS 2014). The four Principles are:

- sustainable water balance,
- good water quality,
- healthy important water related areas and
- good water governance.

Defining shared challenges through a multi-stakeholder process based on a neutral international framework provide a solid basis for achieving consensus on priorities.

A key opportunity identified at the workshop is attempting to integrate water resources planning, bioregional or systematic conservation planning and traditional knowledge of Indigenous People at the scale of the entire Fitzroy River system.

The Fitzroy River and Catchment could provide unique testing ground for integrating water resources planning, bioregional or systematic conservation planning and traditional knowledge in a region characterised by high conservation and cultural values of water.

There is little doubt about the conservation and cultural significance of the Fitzroy River system. Parts of the Fitzroy valley are under consideration for listing as RAMSAR wetlands, and the entire river (700 plus kilometres) was listed as national heritage in 2011 due to its conservation and heritage values. The Fitzroy River is listed as a significant sacred site with the Western Australian Aboriginal Heritage Act.

The workshop endorsed further ongoing participatory planning for the Fitzroy River and its catchment. The workshop acknowledged that planning needs to focus on consolidating, integrating and communicating knowledge; support further inventory and assessments work (as per TRACK and NES, NERF); integrate water and landuse plans; assist in coordinating NRM, fire, pastoral and ranger programs; and develop and test methods of systematic conservation planning and water planning across large areas using existing data.

A key challenge is being able to bring together historically separate approaches together - water and land resources planning, including water and regional economic planning, traditional knowledge and bioregional or systematic conservation planning (see Watson et al 2011). There is no reason why these fields can't be successfully combined into systematic approaches for the planning of rivers and riverine ecosystems as integrated planning methods and frameworks are emerging. Methods that are participatory, future orientated and empowering change could be usefully added (Pahl-Wostl 2007) to the technical aspects of water and conservation planning.

*Recommendation 2: There is a need for large scale, integrated planning for the Fitzroy River Basin that brings together economic development, cultural heritage, water and land resources, systematic conservation and catchment planning.*

## 2.4 Economic development choices for northern Australia

Defining appropriate models of economic development for remote parts of northern Australia remains a complex, multi-faceted policy challenge. There is general agreement that something needs to be done to overcome the situation of Indigenous disadvantage where many people are “land rich and dirt poor” (Altman 2015) but the deeper question is what should be done.

Types of solutions proposed as viable stem from the way problems are defined (Bacchi 2009).

Active consideration of preferred water futures and preferred water governance models are integral to the direction and successes of efforts to enhance remote economic/regional development. The workshop identified the need for further investigation into models of community and economic development that works in remote regions.

The workshop recognised that considerable work has been done in building a coalition of support for appropriate economic development in the Kimberley (Hill et al 2005) and for conceptualising the development of a conservation and cultural economy for northern Australia (see Hill et al 2008).

The workshop identified concerns about proposals for large-scale irrigation development that are being touted as the next big wave of resource development for northern Australia and wanted to see a broader debate about how to achieve social and economic development goals.

Proposals for mega new irrigation developments and the debates around them are not new (Davidson 1969; Lines 1998; Strange and Bashford 2008) with the economist Bruce Davidson arguing in his books the Northern Myth and Australia Wet and Dry that daring national investments in major irrigation developments in northern Australia were costly and ill-conceived (Davidson 1996 and Davidson 1969).

Plans for major irrigation expansion across northern Australia are actively being explored, despite poor soils, extreme climatic conditions, and lack of infrastructure (CSIRO 2009; Campbell 2013; Rayner 2015).

Large dams on most of Australia’s southern and eastern rivers (NLWRA 2002) were constructed at the public’s expense, to supply water for irrigation (Pigram 1986; Larsen et al 2014). For over a century, nation building focused on grand visions of taming rivers and making land productive, driven by ideals of progress (Lines 1994 & 1998), and the virtues of drought proofing. This was part of worldwide trend in hydro-economic development sponsored by governments that centralised control of water policy in water resource agencies (Molle 2009; Molle et al 2009).

Irrigation systems in Southern Australia, including the MDB are largely the legacy of this dominant socio-political perspective, literally and metaphorically concreted into both the physical and cultural landscape, in the form of large dams and irrigation schemes and the institutions and professions that have evolved to operate them and industries that are politically influential (Marshall 2015). In Australia water policy has been largely focused on Southern Australia and the models of water use that evolved there.

In the book *The Northern Myth*, Davidson (1969) convincingly outlines rational economic arguments about the high cost and high risks of large-scale water resource development in northern Australia. Forty years later the NWI reform agreement firmly articulated an intergovernmental commitment to shifting to economically rational policies built around corporatisation of water management agencies, user pays and full cost recovery principles. New water investments in infrastructure, like dams, are required to pass rigorous ecological and economic tests, before approval.

Water and food security concepts are featuring increasingly in the geo-political discourse, with escalating concerns about food, energy and water scarcity emerging as a dominant policy narrative. The predicted economic and social chaos of climate-change driven scarcity, is featuring in international economic growth and geo-political security discourses. The implications are unclear, but deserve critical review because “crisis” framings increase the risk of ill-conceived “solutions”, like large-scale irrigation schemes and hydro dams, being imposed as inevitable responses to the “crisis” (Allouche 2015).

What kinds of investments and policy interventions are most likely to achieve desirable outcomes for the Fitzroy River and its communities?

Building on the work outlining appropriate economic development models in the Kimberley (Hill et al 2005), the workshop identified the need to reconceive remoteness as opportunity and develop new models of remote area economic development, for example seeking opportunities based on capacity and expertise for remote area food, health, energy and water systems.

The workshop also identified the need to focus policies and programs on developing better livelihoods and lifestyles, including through ensuring high quality Water and Sanitation Hygiene (WASH) services and through focusing on ensuring integrated solutions – health, nutrition, education, resources, employment, resilient food systems etc.

Attempts to address remote disadvantage need to celebrate and build on successful cultural and hybrid economy models including existing tourism and other cultural and environment based businesses that could formally become branded as Water Stewards.

This would include focusing more on understanding how the existing hybrid economy depends on and uses living waters and identifying opportunities for supporting and/or growing this (Jackson and Altman 2009).

Further studies on the ways in which the water systems are currently used to generate cultural and economic value were called for and these values recognised in any subsequent water planning processes.

*Recommendation 3: Building capacity for participatory governance of water should be recognised as part of the ways in which desirable futures and appropriate economies will be developed. Integrated approaches to building and sustaining industries and viable communities are required that protect cultural and natural heritage, including living waters and landscapes. Further studies on the ways in which the water systems generate cultural and economic value are required as the basis of understanding how to generate further no-destructive value from these.*

## 2.5 Recognition of native title and Indigenous relationships to waters

*“Indigenous Australians maintain distinctive connections to water that are economic, social, spiritual and ecological in nature. As Indigenous understandings of water are holistic, these elements are entwined and inseparable. There is increasing recognition in the water policy arena of the special nature of Indigenous interests in water. For example, the government’s National Water Initiative explicitly requires the incorporation of Indigenous values, and the inclusion of Indigenous representation, in water planning wherever possible. However, in practice there is still a lack of substantive appreciation of or engagement with the issues and meaningful opportunities for Indigenous involvement in water policy and management remain limited” (Bulloch 2015).*

Waterscapes and water policies are rich in cultural and political symbolism with struggles about water, being struggles over power, symbolic representations, places and natural resources (Archarya 2015 p379). With water, the material and symbolic are blended in complex ways in most cultures (Descola 2012). Waterscapes, rivers and dams are both very real in a material sense, but they are also deeply symbolic, existing within interwoven matrices of culture, power and history (Archarya p379).

Australia’s water policy has been characterised by contested histories, facts, worldviews and visions and this is unlikely to change.

Throughout the world, water agencies are typically hierarchical, centralist and technocratic (Molle et al 2009). Specific policies, technologies or engineering innovations are advocated (Molle 2009) that concentrate or reproduce power without necessarily addressing equity, justice or distributional impacts (Allouche 2015).

Australia’s water reforms have largely failed to address equity and justice considerations in the treatment of Indigenous Peoples’ claims to cultural or economic water (Jackson and Langton 2010) despite recognition of Indigenous interests and the clarification of property rights being central tenants of the reforms (COAG 1995 & 2004) indicating that colonialism continues to underpin the majority of administrative approaches to water policy.

Keeping broader environmental justice principles in view is critical, in terms of looking at questions of who benefits and who pays for proposed water resource developments. To date there appears to have been little serious consideration of Indigenous Peoples’ claims for fairer treatment regarding their continuing interests in living with healthy water systems. Australia’s water reforms have continued to prioritise environmental water (Jackson 2008) or water for irrigation and mining developments.

Indigenous peoples have reason to be wary of proposed new statutory water rights and water based developments in northern Australia – it may turn out to be Australia’s next frontier of dispossession. Furthermore, it is in national interest to clarify the relationships between native title, customary use and statutory rights to water before any confusion turns into a lawyers’ picnic.

Jon Altman (2015) argues that using fresh water as an example *“customary entitlement is entirely unrestricted whereas commercial allocation is regulated by government. But the resource is identical and use for customary purposes can impact on use for commercial purposes and vice versa. Indeed, while not yet legally tested, if commercial over-allocation impacts on the customary rights of native title holders (not just potable water but also water*

*dependent species like fish) then compensation for loss of native title rights and interests might be payable.” (Altman 2015)*

The workshop identified the pressing need to clarify legal and property rights relationships between statutory water rights and existing rights established by native title and customary use. Studies by Jackson and Altman (2009) draw attention to this need.

There is a need to better understand existing use (eg fisheries and tourism) and cultural values (Indigenous and non Indigenous) in order to assess relationship between potential hydrological impacts of proposed developments and how these could impact on economic, ecological and cultural and material values of the riverine and estuarine systems, including those linked to ground water.

*Recommendation 4: There is a clear need for concerted effort to clarify legal and property rights relationships between statutory water rights and existing rights established by native title and customary use and to better understand existing values that may be impacted by any planned changes to water use regimes*

## **2.6 Enhance capacity for water stewards and supply chain linkages**

Effective water governance requires ways of managing the commons in an era of global supply chains. Therefore it is desirable to further develop and enhance local, regional and international linkages and networks that strengthen accountability and the transfer of better practice models. In particular, the workshop identified that there is an opportunity to establish a network of water stewards in business and communities.

Further work to support regional identity and could further develop iconic “Kimberley branding”. In the longer term the networks would aim to achieve a self-funding through brand recognition and through providing supply chain rewards for good water stewardship.

The water stewardship system was identified as a way of strengthening linkages across commerce, primary industry and community stakeholders and along supply chains. It provides an opportunity to reward businesses willing to adopt best practice and has the potential to provide market based incentives.

Such an approach would represent a virtuous cycle, with businesses adopting good practice being rewarded and embedding approaches that aim to meet the needs of the communities and the environment. The development of governance systems that can manage the water commons well in an era of global supply chains represents a significant but worthwhile challenge. Imagine a future where water is well managed because local communities and international customers all have stake in doing so, and where the systems of verification are credible and trusted. In this future the iconic Kimberley brand for tourism experience and exports products is identified globally with best practice in water management. This kind of scenario is both possible and desirable and was articulated at the workshop. It is an alluring prospect and one that deserves further development. Therefore further investigations of the potential of using the Water Stewardship model as the basis for improving water governance are warranted.

*Recommendation 5: Opportunities to further develop the water stewardship approach as a framework for guiding better governance in northern Australia across industry, community and government stakeholders should be actively supported through a range of regionally focused pilot projects.*

## 3. Project background and purpose

### 3.1 Project background

The project to date has been a collaborative venture. The French Government's Fonds Pacifique (Pacific Fund) partially<sup>5</sup> supported the project financially, as one of four regional case studies scoping opportunities to resolve land and water conflicts through improved water governance. Other financial and in-kind support was received from Alexandra and Associates and Spencer Consulting and Anne Poelina of Madjulla. A consortium of researchers and regional project partners is involved in delivering the project (see attachment 1 Workshop background paper).

Each regional case study works with local and regional actors with the aim to both provide material for inter-case study comparison and advance local understanding and action. Information on the Fonds Pacifique project is contained in the workshop background paper at Attachment 1.

The Kimberley case study project has had over ten months planning, with the majority of the planning work being undertaken by Dr Anne Poelina of Madjulla and Jason Alexandra of Alexandra and Associates Pty Ltd, a specialist consultant based in Victoria. An initial proposal to undertake a scenario based strategic planning exercise was rejected after consultation with Kimberley based stakeholders, on the basis that it appeared to be too vague with the risk that it replicated a range of other regional planning exercises that had not resulted in any substantive change.

A variation on the project was developed, in which the focus was defined more strongly as investigating the potential of using the Water Stewardship model as the basis for improving water governance.

### 3.2 Kimberley case study project aims

Through consultation with Michael Spencer of Water Stewardship Australia it was agreed that the project would have four related aims:

- (1) to develop a demonstration of how water stewardship plans can be developed for Northern Australia using the Fitzroy River Basin as a case study;
- (2) to build the capacity of stakeholders in the region to carry the project forward and to test whether this approach supports more appropriate water governance systems for water in the Fitzroy River system;
- (3) to advance Australian and international thinking on cultural water and how the interests of traditional owners can be incorporated into the water stewardship system and feed advice based on this experience into the forthcoming 2016-17 review of the AWS International Water Stewardship Standard;
- (4) to communicate the experience from this project to other communities in Northern Australia and build capability to use the water stewardship methodology to create a multi-stakeholder approach to water management Northern Australia.

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<sup>5</sup> All participants, guests and facilitators donated their time to the project.

The project responds to concerns about the cumulative impacts of current and future water use and how appropriate governance can be put in place to balance economic development goals with social and environmental goals for communities. It aims to contribute to building awareness, knowledge and capacity for water governance and stewardship systems that can meet broad community and industry needs along with the needs of Indigenous people and traditional owners.

This project aims to develop and test the potential of the water stewardship system in northern Australia and use this experience to feed advice to revision of the international standard.

It will provide a demonstration project within Northern Australia for communities and responsible companies to manage relationships where water use is (or is likely to be) contested between different stakeholders as a result of mining and agricultural development projects.

### **3.3 Background to water stewardship**

Water stewardship is an internationally recognised system for planning and certifying best practice in water management, but to date it has not been used in Australia in regions where there are planned new expansions of water resource development and where questions of what Indigenous native title rights mean are being actively negotiated.

The water stewardship brand and standard are becoming recognised internationally. The system has been recognised as an important tool for promoting good water management and water governance by Swiss, German, British and Australian government agencies, major private companies, NGOs and academics.

Water Stewardship Australia (WSA) and its international umbrella organisation the Alliance for Water Stewardship (AWS) have developed systems for recognising and rewarding inclusive, multi-stakeholder stewardship of water resources. Water stewardship encourages collaboration between stakeholders and between peers and aims to achieve a sustainable water balance (quantity), good water quality, good water governance and improved management of water related cultural sites and ecosystems.

The system works to enhance effective water governance through the development of shared water challenges, developing and implementing water stewardship plans based on an approach set out in the AWS International Water Stewardship Standard. The Standard encourages collaboration between stakeholders to determine, address and evaluate impact on water challenges within a catchment.

The Standard includes criteria and indicators for implementing, evaluating and reporting on these plans. It is an important tool for engaging water users in holistic catchment management and water resources planning. Michael Spencer provided a presentation on water stewardship systems. More information on water stewardship can be found at: [www.waterstewardship.org.au](http://www.waterstewardship.org.au) and [www.allianceforwaterstewardship.org](http://www.allianceforwaterstewardship.org)

### **3.4 Consultation and project activities**

The project has been delivered in the following phases:

1. Initial planning including ANU Canberra workshop on the Fonds Pacifique project case studies and exploration of the potential of the Water game suite developed by

Nils Ferrand (<http://www.irstea.fr/en/wat-game-methodological-kit-catchment-area-management>)

2. Scoping and draft project Plan 1 focused on use of facilitated scenario planning methods to explore development of strategic visions
3. Consultation and feedback on draft project plan from key stakeholders including NGO's and Indigenous organisations and the scanning of relevant news and documents, including for example, proposed Northern Australian White Paper, Water for Food and other policies and the responses to these
4. Revision of project plan based on feedback on the need to focus
5. Development of project plan 2 including involving WSA – (see attachment 1)
6. Invitations including media coverage of workshop (see attachment 4)
7. Broome workshop (see attachment 2 for agenda)
8. Production, distribution and refinement of workshop report (this document) and plain English summary
9. Subsequent project plans and actions (yet to be executed)

## 4 Workshop findings and directions

### 4.1 Workshop structure and framings

The first part of the workshop was devoted to introductions and providing background information on the project origins and water stewardship systems (see workshop agenda at Attachment 2 and list of attendees at attachment 3).

During these introductions attendees outlined their concerns about the potential impacts of prospective irrigation developments, citing various estimates of large areas of land and large volumes of water deemed to be available for future irrigation development that are under active investigation (see <http://www.waterforfood.wa.gov.au/pdf/water-for-food-key-aims.pdf>)

Copies of PowerPoint presentations from Jason Alexandra on the project background and an overview of the national and international context and from Michael Spencer on the evolution of water stewardship systems are available as separate attachments due to file sizes.

Jason provided a brief overview of Australia's water policy reforms (COAG 1994 and 2004) and of how any water governance must take into account climate change predictions (IPPC 2012) and its impacts on hydrology (Milly et al 2008). He outlined that there are changing global narratives around energy, water and food security (Allouche et al 2015) and sketched the complex interrelated human, political and technical dimensions of water governance (OECD 2015).

Michael outlined how water management challenges are consistent with wider challenges of managing the commons referring to the work of Ostrom (1990) on *The Evolution of Institutions for Collective Action*. He asked people to consider the challenges of managing common pool resources in the era of global supply chains.

Michael concluded his presentation on how in each catchment context it is important to build capacity for collective decision making and to define the water related risks and

opportunities. This set the scene for the second half of the workshop that provided an opportunity for open-ended discussions about the risks and opportunities.

## **4.2 Future needs analysis/ideas on opportunities**

The second half of the workshop was devoted to identifying major challenges, risk and future needs for improved water governance in the Fitzroy River and its connected surface, groundwater and estuarine systems (and the greater Kimberley).

Three small groups were formed randomly to discuss risk opportunities and future needs (a report from each is at Attachment 3). These were then presented and discussed in a plenary session, in which they were grouped and distilled to the following 5 major outcomes. Each of these is presented as a narrative in the summary section. Below the dot points are as discussed at the workshop

### **Establish a multi stakeholder forum**

1. Establish a multi stakeholder forum (like Fitzcam 2<sup>6</sup> but different) to support and enable:
  - Community and stakeholder engagement
  - Provide trusted channels for communication and consultation
  - Undertake strategic planning and facilitate activities eg working with researchers
  - Build trusts and consolidate science and knowledge
  - Open up communications, build trust and achieve healthier towns and communities
  - Involve industry, philanthropists, NGO and government

### **Conservation and management planning for the Fitzroy**

2. Management planning for the Fitzroy River and its catchment
  - Consolidate and communicate knowledge
  - Undertake assessments (work with TRACK and NES, NERF)
  - Landuse plans
  - Coordination of Caring for Country initiatives; rangers etc
  - Links to better land managements (pastoralism and fire)
  - Identify gaps
  - Build consolidation of traditional and science knowledge
  - Develop and test systematic conservation planning and water planning across large areas using existing data

### **Appropriate economy and remote economic development**

3. Develop appropriate models for remote economic development
  - Reconceive remoteness as opportunity
  - Develop new expertise for remote area energy and water systems
  - Regionalise and localise solutions
  - Develop better livelihoods and lifestyles
  - Integrate solutions – health, education, resources employment, food etc.
  - Celebrate and build on successful cultural economy models including existing tourism and other cultural and environment business
  - Establish network of water stewards in business and communities

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<sup>6</sup> Note the idea of revitalizing a Fitzcam model arose from the three breakout groups independently

- Ensure high quality WASH services
- Understand how the existing economy depends on and uses living waters

#### Clarify legal and property rights relationships to native title and customary use

4. Clarify legal and property rights relationships to native title and customary use
  - Deal with justice and values questions
  - Clarify cultural flows and traditional ownership claims
  - Understand existing use and cultural values and address relationship between potential hydrological impacts and how these could drive ecological and cultural and material impacts

#### Enhance capacity for supply chain and other linkages

5. Develop local, regional and international linkages
  - a. International networks
  - b. Enable and support regional identity and branding that supports local empowerment and involvement in decisions
  - c. Build examples of regional participatory decisions processes
  - d. support the nation of diverse regions idea
  - e. Ensure self funding models through built in rewards for good water stewardship
  - f. Develop unique Kimberley brand and reward stewardship of its waters

#### Challenges and risk

The workshop identified the following matters of concern/risks

1. Proposed new water resource developments including extractive water rights allocations and possible damming, and agricultural projects based on irrigation expansion using both ground and surface waters
2. That issuing of new extractive rights seems to be rushed when there is no apparent justification for urgency
3. Cumulative impacts of oil, gas and mineral extraction
4. Potential for contamination and pollution of ground and surface waters
5. Impacts of poor pastoral land management

In terms of **understanding the riverine system** the workshop identified the need for improved understanding of

6. GW and SW interactions
7. Climate-hydrology interactions
8. Hydrology –ecology relationships
9. Fresh water, salt water and estuarine relationships
10. Flow regimes and patterns and the need for better monitoring of flows that require commitments to 5-10 assessments
11. Riverine dynamics under wet and dry cycles and take account of climate change

In terms of **water property rights** the workshop identified the need for improved understanding of the current situation in terms of:

12. Cultural and material uses and customary water rights

13. Recognition that all water is currently used, valued and therefore “allocated” even if this is not recognised in WA Law
14. That the current uncertain legal framework has yet to define the relationships between extractive water rights and water dependent native title rights
15. How any proposed new water rights are to be issued and how the prior planning conforms to and addresses COAG commitments to the NWI regarding water planning standards
16. Whether there is an opportunity to establish a new or different property rights regimes that suits the circumstances of Northern Australia where there are substantive native title rights to use rivers, including consideration for a strategic Indigenous economic reserve

The workshop identified a number of challenges associated with **remote regional economic development** including:

17. Understanding why large scale irrigation had failed or been slow to establish in the past
18. Better identification of current opportunities and the potential for new industries
19. The need for better understanding of current economic activities (including “hybrid” economies) and how these depend on and relate to living waters
20. The broader need to reconceive appropriate economy opportunities, so as to move away from “mega-resource” type development and instead facilitate growth in value by enhancing existing small and medium enterprises and growth driven by improvements in lifestyles and livelihoods

#### Additional ideas re opportunities

1. Engage Indigenous peoples along and with connection and responsibilities for living water systems about rivers
2. Build international alliances and ensure transfer of ideas on best practice models
3. Develop the ‘Brand Kimberley’ idea to create a global focus on the region as a way of promoting socially and ecologically sound development and as opportunity to gain additional benefit from well managed, inclusive and widely supported management of natural assets.
4. Support further more detailed comparative analysis of water policy and governance challenges and approaches
5. Support systems for more open information on water resource developments and policy reforms that are trusted and independent
6. More support for information gathering, including understanding system dynamics and baselines and sound MER
7. Support further consolidation of existing information and identify gaps
8. Formalise role of regional university in collating information
9. Develop conservation plans for protection of the river and its priority reaches etc

## Opportunities

1. Community engagements
2. Build river community connectivity networks
3. Fitzcam model needs revival
4. Good processes
5. Stakeholder coordination
6. Youth engagement
7. MER
8. Community stories – mapped and told
9. Engage industry
10. Mapping community needs
11. Recognise hybrid economy
12. Establish Indigenous and industry reference groups.

## 4 R&D questions identified

As a scoping project part of the purpose is to identify research questions. The following questions have been identified:

1. How do new extractive water rights relate to native title rights and customary use?
2. What are safe level to set extractions? How should these be set? How are risks and uncertainty addressed?
3. Should new extractive rights be issued in small stages? If so could enterprise be grown in staged ways and impacts (positive and negative) be monitored?
4. How can/will impacts be predicted, assessed and monitored?
5. How much and what kinds of irrigation are best suited to the conditions in the Kimberley?
6. What kinds of existing or new crops are suited to the conditions and will provide opportunities for employment and enterprise development?
7. Are there unique opportunities in producing unique bush foods and other products, marketed with distinct regional brand?
8. In the face of proposed developments are there critical data that should be gathered ASAP?
9. What are the ways in which fossil fuel (oil and gas) extraction will intersect with surface waters and related aquifers?
10. What are the desirable forms of economic development most suited to the conditions? And how can these be facilitated and enhanced?

11. What is the role of water, including new water using and water impacting developments (and water governance arrangements) in appropriate economic development for remote areas of northern Australia?
12. How can complex, interrelated cultural and ecological values be understood and adequately represented in planning models and governance frameworks?
13. What business and governance models can best address the economic development needs of remote regions whilst also protecting ecological and cultural values? How can their development be enabled?
14. How can existing communities and industries (eg tourism and pastoralism) that depend on water and watery environments be further engaged in water stewardship models?
15. How can the iconic Kimberley Brand be developed, utilised and protected?
16. How can the water stewardship approach be used to support the development of more water and culturally sensitive and profitable commercial enterprises suited to the conditions in the Kimberley?
17. Can a clear set of 'shared catchment challenges' be developed for the Fitzroy Valley or sets of challenges for different parts of the Valley?

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## **Attachment 1: Kimberley Water Stewardship Scoping project background paper (used by project team)**

### **Overview**

This document outline initial thinking on a project to explore ways to improve water governance in the Kimberley.

The project is exploring the potential of the water stewardship system to contribute to developing agreed ways forward for managing water in Northern Australia. The project aims to be inclusive inviting all interested parties to contribute – we are consulting with industry, Indigenous and environmental interests.

We are interested in exploring better ways of managing water to build industries and viable communities, while protecting cultural and natural heritage and the living waters and landscapes that make Northern Australia unique.

Water stewardship is an internationally recognised system for planning and certifying best practice in water management, but to date it has not been used in regions where there are planned expansions of water resource development and where questions of what Indigenous native title rights mean are being actively negotiated.

The project will develop and test the potential of the water stewardship system in northern Australia and use this experience to feed advice to revision of the international standard.

### **A scoping project?**

The Kimberley Water Stewardship project is in the scoping or design phase.

We will be consulting widely to explore the potential of the water stewardship system to contribute to improving water resource management and governance in northern Australia.

Ultimately the project aims to develop and test the potential of the international water stewardship system to certify sound water management linking along supply chains industries, from producers to consumers.

We will be consulting widely with Indigenous, industry and environmental interests and plan to bring interested parties together at a water stewardship scoping workshops in Broome and Darwin.

### **Context:**

In Australia's north an extensive network of underground and surface water system link major rivers, floodplain and estuarine systems such as those in the Fitzroy. Major water, mineral and energy resource projects are being investigated and the future of the region is likely to be very different to the past.

Aspirations for community and industry development include plans for increased use and economic extraction of water resources. Sound water governance requires long-term cycles of planning, development and evaluation guided by agreed visions and policy principles that

are shared sufficiently and endorsed by powerful actors, including those operating in markets, governments and local communities.

### **What is water stewardship?**

Water Stewardship Australia is developing and implementing systems for recognising and rewarding inclusive, multi-stakeholder stewardship of water resources. Water stewardship aims to achieve a sustainable water balance (quantity), good water quality, and improved management of water related cultural sites and ecosystems.

The system works to enhance effective water governance through water stewardship plans that are consistent with the International Water Stewardship Standard. The standard encourages collaboration between stakeholders to determine and address water challenges within a catchment and along supply chains.

The standard includes criteria and indicators for implementing, evaluating and reporting on these plans. It is an important tool for engaging water users in holistic catchment management and water resources planning.

The water stewardship brand and standard are becoming recognised internationally. The system has been recognised as an important tool for promoting good water management by Swiss, German, British and Australian government agencies, major private companies, NGOs and academics.

### **Northern Australia – Kimberley Water Stewardship Project**

This project has four purposes:

- (1) to develop a demonstration of how water stewardship plans can be developed for Northern Australia using the Fitzroy Catchment as a case study;
- (2) to build the capacity of stakeholders in the region to carry the project forward and to test whether this approach supports more appropriate water governance systems for water in the Fitzroy;
- (3) to advance Australian and international thinking on cultural water and how the interests of traditional owners can be incorporated into the water stewardship system and feed advice based on this experience into the forthcoming 2016 review of the international standard;
- (4) to communicate the experience from this project to other communities in Northern Australia and build capability to use the water stewardship methodology to create a multi-stakeholder approach to water management Northern Australia.

The project responds to the cumulative impacts of current and future water use and how appropriate governance can be put in place to balance economic development goals with social and environmental goals for communities. It will contribute to building awareness, knowledge and capacity for water governance and stewardship systems that can meet the needs of Indigenous people and traditional owners (for example, identifying preferred ways of managing water resources in the face of significant mining and other development initiatives). It will provide a demonstration project within Northern Australia for communities and responsible companies to manage relationships where water is (or is likely to be) contested between different stakeholders as a result of mining and agricultural development projects.

### Part of the Fonds Pacifique case study work

The preliminary project work is part of an international set of case studies exploring ways to support improved water governance. Other case studies are underway in the Pacific in places like New Caledonia, which have very different histories. By running this set of case studies the team hopes to work out how a longer and larger project could be targeted to support participatory planning and governance.

We know that much consultation, research and planning has been done already and this project aims to build on this foundation. This project is a unique opportunity to kick off a new planning project focusing on ways to investigate preferred futures and to participate in an international comparison of water governance systems where arrangements are currently conflicted and contested. It is hoped that comparison across case study countries will shed light on some of the complex cultural, historical and institutional aspects, which constrain adaptive governance of natural resources.

After initial consultation the Kimberly project has decided to explore the potential of the water stewardship model

The case studies were conceived as scoping studies only - each is investigating critical issues and options for further work – and will be completed by the end of 2016,

### Background to the Fonds Pacific case study work

Increasing international attention is being focused on developing effective ways to improve integrated approaches to land and water management. This is the focus of the Fonds Pacifique Water Governance Project, which aims to identify key issues and opportunities via a scoping project based on number of case studies in the Pacific, including the Kimberley case study.

The Kimberley Case study has been selected as part of an international scoping study on developing water and land use governance. The other case studies are in the Pacific. The project is a cooperative venture between a number of researchers and practitioners. It is coordinated by the ANU and implemented by a consortium of Australian, French and New Caledonian research institutions and private organisations, along with local partners. It has funding support from the French Pacific Fund.

Each case study has agreed to explore five themes:

- Identifying competing/conflicting freshwater and catchment land uses, including in relation to issues of food supply and health, drinking water, agricultural and irrigation water, and water used for industry and mining
- Analyzing local water politics including the historical and contested aspects of integrated water governance
- Describing the actors and trajectories of fresh water management agencies/owners and NGO's and their relationship between various claimants
- Understanding how local water politics are subjected to and influenced by various levels of government and governance arrangements;
- Understanding options for allocation of water to different uses, including understanding competing claims to water and associated land-uses, (including

native title, irrigation, resource industries and environmental) and identifying ways to articulate and resolve these via consultative and participatory planning

### **Fonds Pacifique water governance project Kimberley Case Study**

This Kimberley Case of the Fonds Pacifique Water Governance Project plans to investigate options for establishing a consultative project to explore possible and preferred water futures in the Kimberley.

The scoping study will as a minimum identify key issues within the five themes (see previous page) and set out options for how a larger project could be developed. If the bigger project is to proceed, it is critical that a range of research and other partners will become involved.

#### *Overarching questions*

What are the preferred water futures for the Kimberley over the next 25 years and how can these be articulated clearly? And what kinds of governance arrangements will enable this to be realised?

#### *Research Question:*

Can the internationally recognised Water Stewardship systems be used to help identify and consolidate opportunities to build a participatory planning approach to water resources governance for the Fitzroy Basin?

#### *Research sub-question 1:*

Can the water stewardship system be used to promote participatory water planning and better water governance in northern Australia?

#### *Research sub-question 2:*

How do the International Water Stewardship standards need to be revised to be better able to incorporate Indigenous interests, aspirations and knowledge of water?

#### *Research sub-question 3:*

How can WSA standards be more effectively used to inform policy, planning and better practice in regional water governance?

#### **Resources needed**

This project will introduce water stewardship as a potential collaborative tool for resolving conflict over water in remote regions of Northern Australia. Some seed funding is available for workshop costs from the Fonds Pacifique project.

Funds are being sought to support the cost of the two planning workshops. It is expected that as a result of this project other funding will become available from sources such as governments, NGO's and businesses.

#### **Next steps**

1. Internal agreement on project scope
2. Budget for Fonds Pacifique funds to run Broome workshop
3. Water stewardship briefing and workshop in Darwin
4. Report on scoping phase and development of project plan
5. Seeking of funds for WSA longer term project in northern Australia

## Contacts

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For more information on water stewardship see

[www.waterstewardship.org.au](http://www.waterstewardship.org.au) and [www.allianceforwaterstewardship.org](http://www.allianceforwaterstewardship.org)

For more information on the water and rivers of the Kimberley see

<http://www.environskimberley.org.au/wp-content/uploads/2014/11/Rivers-of-the-Kimberley.pdf>  
<http://www.track.org.au/catchments/fitzroy?page=1>

## **Attachment 2 West Kimberley Water Stewardship Workshop**

**Date: 3<sup>rd</sup> November 2015**

**Location: Lottery House – Meeting Room 2**

**Time: 9.30 am – 4pm**

### **Purpose:**

The workshop is the first consultation for the Kimberley Water Stewardship project which is in its initial scoping or design phase. We aim to use the workshop to help design future projects/work on sustainable water management. We are consulting to explore the potential of the water stewardship system to contribute to improving water resource management and governance in northern Australia.

The project aims to develop and test the potential of the international water stewardship system to certify sound water management linking along supply chains industries, from producers to consumers.

The project/s we are hoping to design have four purposes:

- (1) to develop a demonstration of how water stewardship plans can be developed for Northern Australia using the Fitzroy Catchment as a case study;
- (2) to build the capacity of stakeholders in the region to carry the project forward and to test whether this approach supports more appropriate water governance systems for water in the Fitzroy;
- (3) to advance Australian and international thinking on cultural water and how the interests of traditional owners can be incorporated into the water stewardship system and feed advice based on this experience into the forthcoming 2016 review of the international standard;
- (4) to communicate the experience from this project to other communities in Northern Australia and build capability to use the water stewardship methodology to create a multi-stakeholder approach to water management Northern Australia.

**FOR CATERING PURPOSES WILL YOU PLEASE CONFIRM YOU WILL JOIN US**

If there are any queries please contact: Dr Anne Poelina email: [majala@wn.com.au](mailto:majala@wn.com.au) or m: 0408922155

## AGENDA

### 9.30 am Workshop opening and welcome

Welcome to Country \_ Linda

Introductions – Anne (10 minutes)

**Introduction and water stories**

Opportunity to present stories about people and water connections...

**Water governance in New Caledonia – Leah (10 minutes)**

**Water issues in the Fitzroy - Cat (10 minutes)**

**Jenita Enevoldsen – forthcoming report TWS (10 minutes)**

Questions

10.30 -10-45 break

**Background to this project - Jason (15 minutes)**

What's happening? What are the key issues? Opportunities for improving governance

**Introduction to water stewardship – Michael Spencer – 11.30**

What is it? How does it work?

### Lunch 12 – 1230pm

**Identification of opportunities and risks in small groups sessions**

**What are the big challenges?**

**Identification of opportunities and risks –**

**What needs to happen?**

**To avoid risks and realise opportunities – top 5 for summary**

**Future directions for a water project**

What needs to be done in terms of project/s design

What would like to see in the next few years

Remember – scribe, presenter, top 5 issues and opportunities

**Plenary - Discussion on proposed analysis of risks and opportunities and Future directions**

What needs to happen? What needs to be done? Can these be distilled down to a few priorities?

Workshop summary and closure

**Close 4pm**

### Attachment 3 list of workshop attendees

Linda Dolby Dean	Yawuru Traditional Owner Welcome to Country
Dean Mathews	Senior Project Officer - Land & Sea Unit, Nyamba Buru Yawuru Ltd
Julie Melbourne	Nyamba Buru Yawuru Ltd
Steve Peacock	Bidan Community Member
Tina McMahon	Bidan Community Member
Michael James	Derby Community Member
James Pillsbury	Derby Landcare
Sandra Woollorton	Nulungu Research Institute (Notre Dame University)
Jenita Enevoldsen	The Wilderness Centre Society (Perth)
Wade Freeman	Australian Conservation Foundation ACF
Martin Pritchard	EnvironsKimberley
Cissy Gore-Birch	Fitzroy Crossing
Leila Apathy Agronomy)	Institut Agronomique néo-Calédonien (New Caledonia Institute of Agronomy)
Kate Golson	Researcher
Natalie Pethick	Researcher (Hydrogeology)
Kat Taylor	Researcher (water policy/communications)
Grey Mackay	Kimberley Rangelands NRM
Ian Perdrisat	Madjulla Inc
Anne Poelina	Madjulla Inc
Michael Spencer	Water Stewardship Australia
Jason Alexandra	Alexandra and Assoc. Pty Ltd

## Attachment 4 – Small group notes

### Small group 1 notes

Each of three small groups spent the first part of the afternoon discussing risk and opportunities and then reported back to entire workshop.

Group one prepared a risks and opportunities matrix emphasising the complex interactions between the risks and opportunities, including that they were not one to one but one to many. Their findings are summarised in Table 1 below:

*Table 1 summary of break out group 1*

<b>Water stewardship project</b>	
<b>Opportunities</b>	<b>Risks</b>
<b>Unity/community</b>	
Protection mechanisms for the Fitzroy River	No cultural or environmental water rights; Significant ecological sites/values lost non-sustainable water extraction - water wasted & polluted
Water governance model for the Kimberley; self-funded by enterprise	no funding to drive project - communicate to communities
Aboriginal reference group - for Fitzroy river. Ranger groups involved in research.	No coordinators, 6 language groups- Bunba, Yawru, Nyikina Manala, Gooniandi, Karijarri. Geographically spread communities
Collect community stories about water - share them, map these	Eg. Bore water solutions - Pandanus community have high nitrate levels, want to create ice enterprise - but need better water Climate change and the wet/dry seasons
<b>Universities</b>	
Program and projects in local unis, linking to policy	
Need baseline data - science to fill the gaps.	decision not based on science.
<b>Industry</b>	
involve in water stewardship plan	new abattoir - water pollution Large scale irrigation - water for food projects fracking across Fitzroy catchments
<b>Government/</b>	
review cumulative impacts	Variety of new projects industrial projects
gather champions within departments	
Insufficient monitoring for risks/changes	Water doesn't have a cost - it's the infrastructure which costs
Better consultation and more open processes	Mistrust and lack of government transparency
Genuinely participatory reform processes	Uncertain legal framework for water future.
<b>Future project ideas</b>	
Commit to an organisation structure? Kimberley water stewardship forum/alliance/project - an established network.	This could attract funding through philanthropic community- self-funding mechansim.
Lack of involvement from industry and government	Open inclusive processes
Stop-start funding. How does funding continue?	Set up a group to seek funding for project work.

## Small Group 2 Session Report/notes 2

### What are the Big Challenges?

- Damming: Fitzroy River and/or Meda/ Lennard Rivers.
- Mining: coal, gas, oil, uranium, mineral sands
- Large Scale Agriculture Projects
- Native Title: -getting everyone to speak as one voice  
-not enough resources to manage own affairs  
- Fitzroy Futures
- Different Agendas:  
-communication between groups/ interests  
-the FitzCAM experience  
-new investors eg Gina Rinehart  
-Indigenous observations of changes to ecosystems and impacts from human impact
- Information: - research papers  
-clearer interpretation to provide meaning for Indigenous Australians  
-not enough data (5 to 10 years needed to make a proper assessment)  
-honesty, there is not enough truth in the information  
-transparency  
-accountability
- Planning: “rights of the river” (natural entity right to exist)  
-lack of community engagement and participation in planning  
-lack of capacity building  
-lack of planning regarding awareness, importance, interpretation and communication

### Risks

- Contamination of Water
- Transitional Practice
- Ecosystem Loss – from irrigation pivots, gas wells
- No centralised Data collection point
- No process to identify and focus research needs
- State approach to Development

### Opportunities

- Partnership potentials
- Regional Governance Mechanism
- Central Data Base
- Further Research
- NAILSMA
- Water to be considered more important
- Get young people involved
- TO's to take a more active role
- Mornington Station and other 'green land projects'
- Broader stakeholder involvement (eg. FitzCAM, governments, growers, Indigenous groups, researchers and miners)

- More training and employment, science, conservation and land management, documentation and use of traditional ecological knowledge

### **Regional Governance**

- Kimberley Knowledge Partnership: draw together knowledge from disparate sources to explore meaning in the shared context of the content of the Kimberley region
- Need to change the 'political thinking and action' regarding decision making processes around development in the Kimberley
- Comprehensive engagement of stakeholders – including Indigenous people. Promoting the concepts of free, prior and informed consent
- Identify current decision making processes – “Who is making decisions for this region?”
- Mapping what is currently happening on *Country* at the moment
- Regional decision making as opposed to external (state, federal and international) interests

### **Projects**

- Build the capacity to increase the active participation of Indigenous people
- Improve the capacity of youth (Indigenous and other) leaders
- Peoples Inquiry into Irrigation and Water Use
- National Water Initiative – The federal and state governments to make national water laws, including Indigenous people. Given governments have committed to the process it is the responsibility of the regional voice to hold governments to their commitments.

### **Summary: Top 5 Points**

1. Information gathering: - baseline  
-lit review  
-gap analysis and reporting
2. Coordination of stakeholders and decision makers: partners in a revised renewed FitzCAM
3. Youth engagement/learning: including Indigenous voice
4. Industrial/commercial stress: -dewatering and de-vegetation
5. Monitoring and assessment

### **Notes small group 3**

#### **Risks**

1. New large scale irrigation developments
2. Develop the north ideology and push from governments – decision driven by southerners
3. Cowboys and frontiers
4. Unconventional gas – up to 40000 gas wells
5. More mining
6. Contamination of waters
7. Damming the Fitzroy
8. Climate change – including enhanced competition from weeds and ferals and changed fire
9. Fear of the northern hordes – “don’t fear them - feed them”

## **Opportunities**

1. Integrated landuse and water planning that established preferred zones for different uses
2. Assessment of water resources, hydro-ecology and hydrogeology
3. Understanding how useful and valuable the existing waterscape systems are
4. Identification of no-go areas
5. Establish legal protection for rivers
6. Further develop the conservation and cultural economy
7. Reactive the appropriate economies round table and give effect to its 17 principles
8. Develop a cultural enterprise hub
9. Appropriate remote are development models – remote are specialists, including energy, water, local food production
10. Focus on enhancing quality of life and livelihoods for the people in the Kimberley
11. Build on successful models – eg IPA, rangers and cool season burning
12. Bushfoods
13. Cultural tourism
14. Better practice pastoralism

## **Summary: Top 5 Points**

1. Establish a multi stakeholder forum (Fitzcam2) to
  - a. Coordinate
  - b. Develop ICM plans
  - c. Engage and consult
  - d. Build trust and bridges between experts and communities
  - e. Facilitate independent science
  - f. Identify specific risks
2. Undertake a regional ICM plan including a comprehensive assessments of riverine systems values based on synthesis of knowledge
3. Develop stories/synthesis of how climate and water work in the Kimberley - Why its different and important? Why has large-scale irrigation failed in the past?
4. Appropriate regional economic development – including turning remote area characteristics into competitive advantages – and the role of water in supporting these
5. Promote greater recognition of existing Kimberley economy, and its cultural and conservation values, including customary uses and native title rights

## Attachment 5 Media

### Media after the workshop



### Media release Milestone Meeting on Good Water Stewardship

Kimberley NGOs and community members gathered at a workshop in Broome this week to discuss how Kimberley people can have a stronger voice in decisions about the future use and management of rivers and groundwater.

This comes at a time of increasing concerns about development activities and proposals in the Fitzroy Valley and West Kimberley, and their risks for river systems such as the Fitzroy.

The meeting was sponsored by the Pacific Fund as part of an international program investigating improved water governance systems for Indigenous people in the Pacific. Convened by Dr Anne Poelina and facilitated by a former Murray Darling Basin Authority executive, Jason Alexandra, it was attended by representatives from three Traditional Owner groups, landholders, conservationists, researchers and community members.

Dr Poelina said, “Our long-term goal is that Traditional Owners and the wider regional community are contributing to informed decisions about future water use and allocation that is based on detailed risk assessments and employs international best practice standards.”

The workshop heard about the activities of Water Stewardship International (WSI), whose approach was developed in Australia during the devastating drought of the 2000s and is now being used by local communities worldwide to achieve responsible use and management of freshwater, in ways that are socially and economically beneficial and environmentally sustainable.

The director of Water Stewardship Australia, Michael Spencer, explained: “WSI’s framework considers all the elements of water use and management that communities feel are important, including cultural uses, and it sets standards that are internationally consistent. A key part is to achieve good water governance.”

Dr Poelina said that there was strong support from the participants for the creation of a broad-based coalition of interests along the lines of the Fitzroy Catchment Management Group or FitzCAM, which was set up in the Fitzroy catchment in 2008 and ran for two years.

“We see FitzCAM as the model for different groups to work towards best practice water management, as it brought government and industry together with community members and their organisations. We will look next at how this could happen within a water stewardship framework.” If anyone is interested in learning more about this work contact email [majala@wn.com.au](mailto:majala@wn.com.au) or phone 0408922155.