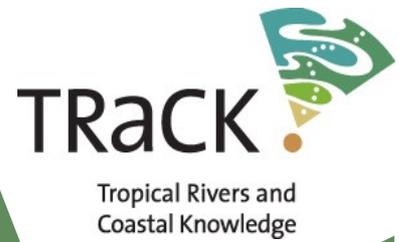




Collaborative Water Planning: Legal and Policy Analysis

Volume 3

Poh-Ling Tan
December 2008



Australian Government
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Report Summary

The purpose of this report is to provide readers with an understanding of the main objectives of national water reform, the critical role that is assigned to water planning by the National Water Initiative (NWI), and the legal and policy framework implementing that reform in northern Australia. The collaborative planning process engages the full range of stakeholders, including Indigenous and other local communities as well as industry. It involves making use of scientific and environmental knowledge and socio-economic analysis.

Water planning is the *only* mechanism contemplated under the NWI for constructing the public benefit and sustainability outcomes desired by particular communities. Knowing this makes it all the more important that the objective of open and transparent processes is achieved.

Water planning has been carried out in the three jurisdictions of Northern Australia, namely Western Australia, Northern Territory and Queensland, but in many parts of the region, there is little understanding of the NWI in general and the processes which should be used in collaborative water planning in particular.

The report is written for readers who do not have a legal background but are particularly interested in water planning in northern Australia. While the complexity of the subject must be acknowledged, the provision of a glossary containing names and terms may assist readers to keep track of and gain familiarity with important concepts and the many organisations, relevant pieces of legislation and so on, that feature in the legal and policy sphere of water planning.

This report reviews the legislation, case-law and policy on water planning, with a focus on the *process* of planning not the content of plans. It also interprets analysis of published material in addition to that surveyed in this project's separate literature review and forecasts possible implications for readers. It starts at the Commonwealth level looking at the Constitution, as well as more recent policy and legislative aspects including the NWI; Native Title and Cultural Heritage legislation; and the National Water Plan. It then provides case studies of the water planning legal frameworks for Queensland, Northern Territory, and Western Australia. It uses New South Wales as a bench-mark as water planning commenced in that state in 1998 and the process has gone through revisions, thus providing opportunity for learning.

The structure of the report is outlined at 1.2. An overview of collaborative processes in water planning is used to set the scene for the case studies examining water planning processes across northern Australia. Eleven themes* are used to structure the case studies:

- Planning objectives that provide for sustainability and adaptive management.
- Provisions for standards and procedures for statutory water planning
- Provisions that allows for reasonable deadlines

* These themes have been adopted from important elements of the NWI and from analysis of its implementation by Gentle and Olszak (2007).

- Provisions for socio-economic or other analysis
- Community engagement in gathering and assessing scientific data including the communication of science in water planning
- Provisions for stakeholder engagement
- Provisions for indigenous engagement
- Provisions for transparency in decision-making
- Provisions clarifying the relationship between planning and political process
- Guidelines for use of mediation/negotiation/other conflict resolution techniques
- Integration of water plans with other planning processes including broader natural resource management.

Table 1 at page 42 sets out the relevant NWI provisions for consultation in water planning.

A total of 17 proposals are made in relation to eight major areas for improvement in collaborative processes in water planning. Formal recommendations will be included in the culminating part of this project. The eight major areas for improvement are:

Collaborative water planning requires the development of clear objectives

In all jurisdictions except the Northern Territory, the objectives of water legislation acknowledge the role of the community in water planning. Legislation in each jurisdiction should provide a statement of objectives that specifically refers to collaboration in water management and planning. Principles of collaborative planning should be provided either in legislation or in a policy document. It would be helpful for all jurisdictions to adopt a common statement of principles relating to collaboration, outlining what it means, the objectives that collaboration should achieve, and what levels of collaboration are required in different circumstances.

Promoting stakeholder engagement through deliberative processes

Stakeholder engagement is strongly supported by the NWI, and recognised by legislation in most jurisdictions. A broad range of stakeholders is anticipated – those within or downstream of the plan area, affected water users, communities, industry (e.g. agriculture and mining) and Indigenous peoples. Engagement is seen as critical for creating and maintaining public confidence in water plans and their implementation. States have adopted a rather formulaic approach, with engagement occurring mainly through community panels which may or may not be representative of sectoral interests. There is a lack of reference to or requirement for deliberative participatory processes within Australian water policy and law. Regulatory design in water planning requires a greater emphasis on such processes to develop a range of mechanisms suitable for adoption in a variety of contexts. National principles along the lines of those developed for provision of water for ecosystems would be helpful in this context.

Promoting collaboration through transparency

The NWI emphasises technical assessments and socio-economic analysis as important in providing a sound basis for decision-making. Where these are undertaken, all jurisdictions currently provide for reports to be made publicly available. Satisfaction of this requirement in and of itself does not mean that decisions are transparent. Transparency in decision-making processes is a concept

which is relatively new to the management of water, where decisions have long been the domain of administrators as experts. How best to provide for transparency in decision making remains a continuing challenge throughout Australia. The position varies across the jurisdictions of interest to this analysis.

Decision makers are now guided by a number of principles or objectives laid down in legislation but discretionary powers remain available. These discretionary aspects of the process provide for flexibility but may also introduce confusion and uncertainty into planning. Flexibility and discretion in decision making are features in a planning framework where, in the current era, final decisions are made by a Minister. Requiring ministers to justify a departure from the usual process, or the making of a decision that contradicts the aspirations of a community panel or technical (including socio-economic) assessments may contribute towards promoting public confidence in decision-makers.

Ensuring decisions are based on accurate information and analysis

Despite NWI provisions, requirements for technical assessment and their standards vary greatly across jurisdictions. The NWI provides that socio-economic analysis, community input and information from the best available science are pre-requisites for the settling of trade-offs between competing water users. Gathering of base-line data for constructing the water-use profile of the planned area, understanding biophysical, social and economic conditions of the catchments and identifying community issues as they relate to water resource management are first steps in socio-economic analysis. The next step involves generating and evaluating options based on the above and assessing effects of changes arising from water use decisions. The use of these analyses enables decision makers to justify choices made between alternative scenarios.

Many of the jurisdictions do not mandate the use of socio-economic or other analysis. A recent national study of water planning found that if carried out at all, socio-economic assessments were highly variable in quality (Hamstead et al 2008). This study further showed that the community has little confidence that the decision has given due consideration to all relevant factors and analyses.

Improving the writing of water plans

Attention should be given to clear and concise writing of water plans. At present, they are often difficult to understand and expressed in an overly complex manner. Courts have referred to difficulties associated with plans which are written in such a complex way that anyone seeking to understand them had an extraordinarily difficult task; moreover that if the literal meaning of some clauses was adopted, the plan could not operate.

On the other side, plans may contain terms that are broad, imprecise or subjective; and performance indicators may be so general that it is difficult to ascertain whether they have been achieved. The setting of performance indicators is highly relevant to ongoing processes and stakeholders will be discouraged and disinterested if they are not able to assess whether plans are actually being implemented.

Providing for Indigenous interests in water planning

An area for improvement repeatedly noted is that Indigenous interests are not adequately provided for in planning practice. There is qualified recognition of Indigenous rights to water in the NWI, the provisions of which are attempting to steer a difficult course between the strict legal requirements of native title, and the wider approach that Indigenous social, spiritual and customary objectives have intrinsic value and should be considered in planning.

While high level policy statements made by the jurisdictions of Northern Australia contain strong commitments to Indigenous engagement, it may appear rhetorical given that there is a shortfall between the policy and its implementation. Indigenous rights to water have also been narrowly construed by case-law and legislation to refer only to domestic (i.e. non-commercial) uses of water.

Indigenous communities have stated clearly that where planning involves their interests, it ought to respect their timeframes and decision-making processes. In view of the attention given to meeting Indigenous needs to access water and participate in water planning, allowing sufficient time will be a consideration.

It is suggested that a policy on appropriate Indigenous engagement should be drawn up. For example, a water planning cultural assessment policy could identify cultural values, assets and objectives. Consideration needs to be given to ensuring that native title holders can continue to enjoy their rights to fish and hunt for example, in the face of increased water use and allocations.

Identifying and using appropriate dispute resolution processes

Few policy guidelines exist across the jurisdictions for mediation of disputes, or the use of conflict resolution mechanisms in water planning. Given that the ability of parties to take disputes for judicial resolution has been limited, it would be reasonable to see further development of more alternative dispute resolution mechanisms (ADR) in this area. In stark contrast with research, knowledge and practice of ADR in private and commercial disputes, environmental or public dispute resolution is in its early phases in Australia. Existing policies related to the use of conflict resolution mechanisms appear to be underdeveloped.

There are several techniques adopted for conflict management in water resources, for example mediation, facilitation and consensus building. Where consensus building was introduced as a planning mechanism, it was not well designed and implemented. It is apparent that few of the jurisdictions have developed policy that benefits from existing knowledge on designing systematic approaches to consensus building. All jurisdictions will benefit, at the very outset, from designing a planning system for managing conflict rather than ignoring its existence.

The importance of adequate resourcing

Finally, this report notes the general deficiency in resourcing collaborative efforts in water planning. Though not directly related to the NWI, the two most recent formulations of national policy relating to water, the Howard government's National Plan for Water Security and the Rudd government's National Plan for Water, have allocated vast sums of money on capital works for modernising irrigation systems and other matters directly affecting consumptive use. Although no definite provisions

are as yet available, it appears that despite the NWI identifying water plans as being the key mechanism for delivery of national water reforms, there is limited support of the water planning efforts made in the states, in comparison with the very significant support given to infrastructure building and water buy-back in the Murray-Darling Basin.

In general Australian policy-makers and legislatures have been able to work together for water reform in ways that other countries have not been able to. Water planning is not new; however in the past it adopted a technical approach which did not require collaboration with communities. Assessments of water reform progress tell us that agencies in all jurisdictions have yet to adequately meet the challenge of water planning. Slow progress may partially be explained by the difficulties experienced by agencies' realignment of priorities, and development of new strategies and skills. In this era of water resource uncertainty, it is essential to gain public confidence in measures designed to deliver on the objectives of water reform. For this reason alone, collaborative water planning needs the full support of governments.

Table of Acronyms

ACH	Aboriginal Cultural Heritage
ADR	Alternative Dispute Resolution
ALR	Australian Law Reports
ALRA	<i>Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)</i>
ANZECC	Australian and New Zealand Environmental and Conservation Council
ARMCANZ	Agricultural and Resource Management Council of Australia and New Zealand
ATSIC	Aboriginal and Torres Strait Islander Commission (abolished 2005)
CBWC	Condamine-Balonne Water Commission
CHMP	Cultural Heritage Management Plan
CLR	Centre for Land Rehabilitation
CMAAs	Catchment Management Authorities
CoAG	Council of Australian Governments
CRP	Community Reference Panel
CSIRO	Commonwealth, Scientific and Industrial Research Organisation
CTH	Commonwealth
DEC	Department of Environment and Climate Change
DLWC	NSW Department of Land and Water Conservation
DNRM	Department of Natural Resources and Water
DoW	Western Australian Department of Water
DPI	Department of Primary Industries
DRMAC	Daly River Management Advisory Committee
EDO	Environmental Defender's Office
EFO	Environmental Flow Objectives
EPA	Environmental Protection Agency
ESD	Environmentally Sustainable Development
EWP	Environmental Water Provisions
EWR	Environmental Water Resources
FCA	Federal Court of Australia
GAB	Great Artesian Basin
GMUs	Groundwater Management Units
HCA	High Court of Australia
IACSEA	Independent Advisory Committee on Socio-Economic Analysis
ILUA	Indigenous Land Use Agreement
IWG	Indigenous Working Group
KWAC	Katherine Water Advisory Committee

LWMP	Land and Water Management Plans
MC	Management Committee
MDBA	Murray-Darling Basin Authority
MG	Miriuwung Gajerrong
MRWAC	Murray River Water Advisory Council
NCC	National Competition Council
NNTT	National Native Title Tribunal
NRETA	Northern Territory Department of Natural Resources and the Arts (now NRETAS – Department of Natural Resources, Environment, The Arts and Sport)
NRM	Natural Resource Management
NRW	Queensland Department of Natural Resources and Water
NSW	New South Wales
NSWCA	New South Wales Court of Appeal
NSWLEC	New South Wales Land and Environment Court
NT	Northern Territory
NTA	<i>Native Title Act 1993 (Cth)</i>
NWC	National Water Commission
NWI	National Water Initiative
ORWMP	Ord River Water Management Plan
QLD	Queensland
RIWI	Rights in Water and Irrigation
RMC	River Management Committee
ROP	Resource Operations Plans
SWMOP	State Water Management Outcomes Plan
SWNRM	South West Natural Resource Management
TAP	Technical Assessment Panels
TOR	Terms of Reference
TRaCK	Tropical Rivers and Coastal Knowledge
UN	United Nations
WA	Western Australia
WAC	Water Advisory Committee
WAMP	Water Allocation and Management Plan
WAP	Water Allocation Plan
WASO	Water Allocation Security Objectives
WMA	<i>Water Management (New South Wales) Act 2000</i>
WMC	Water Management Committee
WRIC	Water Reform Implementation Committee
WRMP	Water Resource Management Plan

WRP	Water Resource Plans
WRS	Water Resource Strategies
WSC	Water Sharing Committee
WSP	Water Sharing Plans
WUP	Water Use Plans

1. Introduction

1.1 Project overview

This overview describes a three-part project, of which this report, Volume 3, is only one aspect.

After Antarctica, Australia is the driest continent on Earth. Water is differentially distributed across its surface. Groundwater – water below the surface of the earth – is related to surface water in complex ways that sometimes span the boundaries of many surface-water catchments. In Australia, this is particularly the case with deep groundwater. Climate change is causing significant changes in rainfall. In general terms, areas in the south of the continent are subject to drying, and areas in the north are experiencing greater rainfall and the prospect of more extreme weather events. While Council of Australian Governments (CoAG) agreements have sought to encourage consistency in water management, it is unsurprising that a federation of states and territories, all experiencing climatic change in different ways, has considerable variation in legislation and government policies.

The vast majority of Australian people live within 50 kilometres of the coast (Natural Resource Management Ministerial Council 2006:4). The trend towards coastal living is continuing and is particularly evident in the major urban areas of Australia. This population pressure, combined with changing rainfall patterns, particularly lower rainfalls in urban water catchments, is placing significant pressure on urban water supplies. While many of the heavily populated areas of coastal and southern Australia are experiencing less rainfall due to the influence of climate change, the reverse is true in many parts of northern Australia. Demand for water for irrigation is high and, increasingly, not able to be met in areas of the south of the continent where agriculture is a dominant land use. There are growing calls to investigate the agricultural potential of the now wetter north of the continent in response to this pressure.

Yet water resource science and planning are in their infancy in northern Australia and this vast area faces an enormous knowledge deficit, under-developed catchment management structures, low population numbers, and a growing Indigenous population facing multiple sources of social and economic disadvantage. Indigenous environmental knowledge will be of value in improving our understanding of water resource issues, but new pressures and changing institutional arrangements will require concerted efforts from all participants (Hamilton and Gehrke 2005).

Australia's pre-eminent water policy, the National Water Initiative (NWI) places a great deal of emphasis on water planning as the mechanism through which water resource management will be restructured and sustainable and equitable water allocations achieved. It calls on States and Territories to develop water entitlement and planning frameworks to:

- address systems where water is over-allocated or overused
- address environmental and public needs for water
- reflect regional differences in water supply
- identify and manage high conservation value water systems.

CoAG and the NWI have set an ambitious agenda for reform. Achievement of the central objectives of the reform depends on comprehensive planning systems based on full basin-wide hydrological assessment of the resource. Water planning is seen as “an important mechanism to assist governments and the community to determine water management and allocation decisions to meet productive environmental and social objectives” (Council of Australian Governments 2004: para 36). The NWI requires more transparent and comprehensive water planning that deals with key emerging issues. The plans, based on adaptive management, are to provide for secure ecological outcomes *and* resource security outcomes.

The Commonwealth has also acquired a new and expanded role in water management planning and achieving the NWI and CoAG outcomes in the Murray Darling Basin through the *Water Act 2007* (Cth).

A strong principle that underpins planning is that water users, interest groups and the general community are to be involved as partners in catchment planning processes. Rising concern for environmental sustainability and the need for water planning, water entitlements and water trading processes to take account of local circumstances explain the emphasis given to public participation in the NWI (Connell, Dovers and Grafton 2005). Water planning processes usually involve some element of community consultation and participation, often via the establishment of advisory committees or reference groups comprising representatives of groups from industry, community and government. But despite the attempt to consult and involve the public in water reform and management, the scale and pace of change and the size of the water governance challenge has meant that implementation has been contentious.

Tensions will inevitably arise between different stakeholders, particularly where over-allocated water systems are required to be returned to an environmentally sustainable level of extraction (Hussey and Dovers 2006). It is precisely for the purposes of reconciling conflict between stakeholders that the water planning process is required to be transparent. The whole planning process and management system is required to provide a much greater capacity to make trade-offs between competing uses in ways that will gain and maintain community support (Connell and Dovers 2006).

For all the recent discussion on the virtues of community-government partnerships, there is insufficient clarity and agreement amongst various parties as to what constitutes a partnership or collaboration, and how collaborative procedures actually operate. This review and analysis of the literature highlights the ill-defined and nebulous nature of the community-government partnership principle. This is due, at least in part, to the way power, responsibility and authority are understood by politicians and government agency staff involved and the way that, as a result, these ‘partnerships’ are then implemented and evaluated. While some may see empowering the community as potentially providing better outcomes from the implementation of government policy, others may see it as eroding the power, responsibility and authority of a democratically elected government. Depending on circumstances, both may be correct. Tension between citizen participation and representative democracy gives rise to a variety of competing and sometimes contradictory interpretations and definitions of terms found in the literature on citizen participation, public involvement and community engagement in government. This confusion is mirrored in the literature on the role of citizens in natural resource planning and management. In practice, government water planners and those they involve in the process from community and industry may also understand a range of terms differently. For example, some may see ‘partnering’ as working together or collaborating with others in a way that involves re-negotiating authority or

'partnership' and responsibility. Others may have in mind a relatively passive process of informing or consulting and seeking opinions of those who may be affected by water planning processes. This ambiguity extends to a wide range of terms relating to public participation in the water planning process, including 'collaboration', a concept which is central to the concerns of this report.

In this *Collaborative Water Planning Project* the research team has used the term collaboration to mean 'actively working together'. The research team is interested in better understanding ways that people engage in an active process of working together to manage water; in how collaborative procedures actually operate in this context. Government agencies usually initiate and lead water planning processes. This generally involves informing and consulting with the community and industries affected by the outcomes. Collaborative approaches need to involve citizens more actively as members of water planning committees: learning about water issues, undertaking joint fact-finding, formulating decision-criteria and making decisions together about advice to government on water planning matters. Implicit is the notion of inter-dependence, where the parties have something to gain from collaborating, indeed, believe they can only achieve their respective outcomes by doing so.

It is in this setting that the TRaCK Collaborative Water Planning Project has sought to understand the practice of collaborative water planning, and in particular, the barriers to and enablers of effective public participation. TRaCK, the Tropical Rivers and Coastal Knowledge Research Hub, is a consortium led by Charles Darwin University, CSIRO, Griffith University, Land & Water Australia, the North Australian Indigenous Land & Sea Management Alliance and the University of Western Australia. In 2007, TRaCK was established as a research hub under the Commonwealth Environmental Research Facilities Program. TRaCK aims to provide the science and knowledge needed by governments, communities and industries for the sustainable use and management of Australia's tropical rivers and estuaries.

The Collaborative Water Planning Project seeks to improve water planning efforts at two levels:

- **nationally** by developing a tool-kit of good practices to engage industry, Indigenous and rural communities; by setting guidelines and benchmarks to monitor and evaluate collaboration in water planning; by establishing procedures that integrate Indigenous values into water planning; and
- **regionally** by assisting northern Australian water agencies to improve water planning approaches; by helping to minimise conflicts between parties; by providing models and case studies for good collaboration; by encouraging stronger, long-term relationships between stakeholders.

The project has three components (See Figure 1 below):

1. a review and analysis of the literature to provide the conceptual foundation underpinning the project. As well as scientific literature relating to natural resource management, water administration and planning, collaboration and public participation (Volume One), this component includes a review of public dispute resolution (Volume Two), and the legal and policy environment relevant to northern Australia (Volume Three);
2. two retrospective case studies that sought to understand contemporary water resources planning in north Australian settings, one of the Ord River Water

Resources Plan in Western Australia and another of the Gulf Water Resources Plan in Queensland;

3. two prospective case studies, one in either the Greater Darwin region or Mataranka in the Northern Territory, and the other in the Wet Tropics Region of north Queensland.

Figure 1 below shows the sequence of activities to be undertaken in two phases. The literature review (Volume One), review of public dispute resolution over natural resources (Volume Two), the Legal and Policy Analysis (Volume Three) and the two retrospective case studies (Volume Four) are all to be undertaken in Phase One.



Figure 1: Diagram showing timing of various project components

1.2 Structure of this report

This document reviews the legislation, case-law and policy on water planning, with a focus mainly on the process of planning, touching on content or substantive matters only where they relate closely to the stages of the plan. It also interprets analysis of published material and forecasts possible implications for readers. It is written for readers who do not have a legal background but are particularly interested in water planning in northern Australia.

Chapter 2 describes aspects of the legal framework relating to water. It starts with an explanation of rights at common law – riparian rights, rights to groundwater, and to overland flows, before moving on to explain some of the objectives underpinning the regulatory regime in water. It then considers legal issues at the Commonwealth level. Australia has a federal system and jurisdiction over water, as with other natural resources, is shared between the state and Commonwealth governments. This chapter explains the Constitutional framework for water management. Besides water, native title is yet another matter where there is a joint Commonwealth and state approach. In this case, there is a uniform approach as Commonwealth native title legislation is mirrored by each of the states, and the same principles of protecting and extinguishing native title applies. Although the same national approach is not taken for cultural heritage matters, it is convenient to consider these issues alongside native title.

We move to a discussion of the implementation requirements of statutory water planning under the National Water Initiative (NWI) in Chapter 3. After a brief overview of the NWI, the chapter attempts to explain the objectives, the key actions, and the target dates for implementing water planning. It also sets out processes required for water planning, and the products or immediate consequences for plans. While the NWI requires states to produce plans which are consistent with its standards, at the same time it allows a large amount of flexibility in the type of plans, and the details of the planning process differs in each jurisdiction. To allow comparisons to be drawn across jurisdictions, eleven themes are used to describe and interpret the processes, and consider whether requirements of the NWI have been met.

Chapters 4, 5 and 6 present both an explanation and a critical analysis of the water planning framework and processes in Queensland, Western Australia and the Northern Territory. The chapter begins by providing an outline of the history of water resource development and legislation for each of these jurisdictions. The current legislative framework for the allocation and management of water is briefly explained and features relating to the understanding of water issues in each particular jurisdiction are also explained. These chapters then present a thematic analysis of water planning in the specific jurisdiction.

To enable readers to put the jurisdictional analyses into an Australia-wide context, Chapter 7 examines water planning issues in New South Wales. NSW was chosen as a 'bench-mark' state for several reasons:

- Water planning started in 1997 and there has been independent analysis of the processes.
- Planning processes have evolved and there are a number of lessons to be drawn.
- Innovative mechanisms have been adopted for Indigenous water use.
- There was a substantial level of conflict over water plans, with decisions being reached at the Court of Appeal in two instances. These decisions provide objective assessment of the plans and provide insight as to whether the Minister fulfilled statutory duties.
- The latest template for planning, the macro-planning process, has been subjected to rigorous expert review.

The last chapter draws together findings from the comparative analysis and, where lessons are clear, forwards proposals for consideration. Formal recommendations will be made in the culminating part of this project in late 2009.

2. Legal frameworks relating to water

Legislation and legal principles may be likened to a complex and very large jigsaw puzzle. The purpose of this short chapter is to give an overall picture of the puzzle so that readers may later perceive how pieces of the water planning puzzle fit together. It describes how rules governing water in the past were organised and what the main concerns of the law were at that time. By doing so it is hoped that the reader can understand how the past has shaped the present legal framework, which is described in more detail in the later chapters of this report.

Access to water resources in Australia has, in the last 250 years, been governed by three different legal frameworks or regimes. Until colonial settlement, Indigenous peoples' relationship to land and water was characterised by custodial obligations, which were only recently recognised by non-indigenous law. Indigenous people exercised group/joint property rights over water for many thousands of years with individual rights and responsibilities derived from wider mytho-geographical knowledge (Langton, 2002: 45). Langton describes these rights and responsibilities in relation to water bodies, many of which are still observed today in regions of Australia, as 'jural' in nature.¹ The extent to which these Indigenous institutions are currently recognised will be discussed in Chapter 3.2.

As part of the reception of the English common law into Australia, the colonisers instituted a second regime of access to water based on a different sort of common property regime. The common law had two different schemes to allow access to water.

The first scheme, riparian rights, related to surface water flowing in a river. Riparian rights were restricted to a select group of people who occupied land immediately next to rivers. These rights had certain limitations – riparian owners and occupiers could use water for all ordinary and domestic purposes provided the quality of water in the river was not substantially affected. If water was taken for manufacturing or irrigation for commercial gain, then use had to be reasonable. This meant that water was to be returned to the river or stream substantially undiminished in quantity and quality (Howarth 1992). The common law recognised the correlative nature of surface water use; that is, that one person's use affected another's, and limits placed by the law indirectly restricted individual consumption.

The second scheme related to all other categories of surface water or groundwater that flowed in an undefined manner over or under land, or was collected artificially on the land. In contrast to the riparian scheme, the owner of the land had unrestricted right of access to these classes of water. This was based on policy considerations in 19th century England, as well as the legal doctrine that owners of land would have unrestricted discretion over the soil, subsoil and resources in the subsoil. Therefore, 'water collected or conserved by one means or another on land, as a result of natural processes, belongs to the owner of the land and the owner, in exercise of this right, can do as they please with the water' (Fisher 2000, p84).

Two other common law concepts are relevant; Firstly, the common law recognised limited public rights over rivers – of navigation and of fisheries (Howarth, 1992). These could be exercised over tidal rivers only. Secondly, the common law reflected

¹ 'Jural' means relating to law, in other words, of a legal nature.

Roman law principles and recognised that running water was *publici juris* (of public right), or as public *and* common. No right of property therefore existed in flowing water (ie in rivers) until it was captured.² With respect to overland flow, the owner of land over which the water flowed had a right to capture the water.

The common law was a legal transplant – its rules on water were drawn from European notions of rivers, with defined beds and banks, and transplanted to the Australian landscape where waterways are often intermittent and waterholes are linked only in wet seasons. Water in England in the 19th century was in plentiful supply therefore many of the decisions of the courts related to flood protection. As a legal transplant, common law principles not only did not fit with hydrological reality, they were not suitable to fulfil the colonies' needs for secure water supplies, particularly for agricultural pursuits.

Drought conditions in the 1870s and early 1880s in Victoria made the public conscious of the need for dams. Private investment in dams was risky and so, public money was required. Chapter 2 of Volume 1 sets out the circumstances in which regulatory control was asserted over water in more detail. The third legal regime introduced to allocate and manage water in Australia took the form of regulatory control through administrative grants. Alfred Deakin, the architect of the Australian water regulatory regime, introduced revolutionary legislation into Victoria in 1885. Australia was the first country with a wholly common law tradition to accept state control of water resources. Deakin assessed the situation thus:

The one lesson to be learned [from the study of American irrigation] is that in any introduction of irrigation into Victoria it will be necessary to provide against the separate ownership of land and water, except where the water may belong to the State or is sold under its regulations. Applications for water will require to be carefully considered, and the grant of water rights even for fixed periods jealously guarded ...[water] is a treasure which no state can afford to give carelessly away.³

The introduction of a regulatory regime in Australia generally married two legal approaches - it introduced administrative control over water while retaining the common law's disdain of acknowledging property rights in water. The objectives for introducing state control were to avoid judicial apportionment of water; to overcome the vagaries of the riparian system; and to create a system that would 'encourage the greatest possible utilisation of water over the largest possible area' (Clark and Renard 1972, p 172).

Public management of Australian water was, and is enabled by the early legislation such as the *Water Rights Act 1896* (NSW) which focused on rights to the use, flow and control of water in rivers and lakes which flow through or past land of two or more occupiers. The exercise of the rights was and is 'vested' in the Crown which meant that in Queensland and Victoria the vesting of this right in the Crown was complemented by rights of property in the bed and banks of certain watercourses. A system of administrative grants for water put in place first in Victoria and then in NSW, became the template for the rest of the jurisdictions.

Over the next hundred years water allocation arrangements became extremely complicated as they were tailored to suit the types of crops grown, local land use and

² *Embrey v Owen* (1851) 6 Exch 353 at 369, per Baron Parkes

³ *First Progress Report of the Royal Commission on Water Supply - Irrigation in Western America* [1885] 2 Victorian Parliamentary Papers, 47

water supply patterns. In addition, metropolitan water supply, sewerage and drainage agencies were generally placed beyond the scope of generic water legislation and managed under special laws. Under these laws water boards and agencies also allocated water, often allocating one water source to one water user. The problems that emerged in Victoria and NSW in the 1970s are referred to in chapter 2.1.3 of Volume One of this report. John Paterson, who had reviewed water policy in NSW and was Director-General of Water Resources in Victoria in the 1980s summed up the administrative problems:

.. taking of water and drainage and river improvement are dealt with differently in different parts of the state under different Acts. The complexity of these statutory arrangements and of the complex institutional arrangements based on them effectively put management of water systems beyond the practical reach of elected governments and beyond the conceptual reach of most people in positions of responsibility within the industry (Paterson 1985, 125).

There were also grave concerns about overallocation, water quality and salinisation of land. In many states although the management models had changed from centralised decision-making in the era of big dam building in the 1950s and 60s to technocratic managerialism in the 1970s and 80s, the basic legal framework remained the same. The regime was increasingly reliant on administrative discretion which was criticised for not being exercised consistently. Political decisions taken during key election times were also subject to criticism.

By the mid-1980s reviews in NSW and Victoria led policy makers to realise that major organisational and legislative changes were needed. Reforms undertaken from the mid-1980s to 1995 are described elsewhere (Tan 2001, 2002). With increased competition over water and the imposition of 'embargoes' preventing the further issue of water licences, trading water became an issue. Access to water for new enterprises was not possible unless governments used their statutory powers to revoke licences for breach of conditions, or refused to renew licences that had lapsed. This they were reluctant to do. Also, reforms were undertaken on statewide basis, and each state took measures thought appropriate for their own particular issues. In addition, there was increasing realisation that particular issues had not been addressed sufficiently by the legal regime; for example, overland flows.⁴ Until this point in time, the legal regime was confined to managing the deleterious effects of floods, and access to overland flows was not regulated.

Concerns were addressed in a consistent manner through the National Reform Framework agreed upon by the Council of Australian Governments (CoAG) more fully described in Chapter 2.2 of Volume One. Following CoAG reform in the mid 1990s, most states have either introduced new water legislation or amended existing legislation. Fragmentation is minimised as the water legislation is intended to extend to all aspects of water allocation and management, except for water quality. Generic features of the new and amended water legislation are:

- The state's right to water, and duty to manage water;
- Statement of objectives of water management;
- Planning for allocation and management of water;

⁴ This term refers to water that runs across the land after rainfall and before it enters a watercourse, or after it leaves a watercourse as floodwater, or after it rises to the surface naturally from underground.

- Allocation of water for extensive public and private use through statutory entitlements;
- Allocation of water for environmental flows, with statutory entitlements in some states;
- Basic rights to domestic and stock water without entitlements;
- A register of entitlements;
- A system of trading and leasing water;
- Water supply authorities, functions, powers and service;
- Infrastructure maintenance;
- Riverine protection, control of activities including small dams, drilling of wells;
- Offences, investigation and enforcement.

To summarise, the laws relating to water were forcibly changed by colonisation. Transplanted into this country, the common law sat uneasily with Australian conditions and societal demands resulted in regulatory control over water. Concerns over the environment and styles of management have seen changes in law since the mid 1980s. Economic, environmental, political, ideological and pragmatic forces built up momentum that led to nationwide reform in the mid 1990s to early 2000. Some limited recognition was given to the legal rights of Indigenous traditional owners with the passage of the Native Title Act, and references in the National Water Initiative. As later chapters will explain, planning instruments are at the core of the new legal regime.

3. Commonwealth

3.1 Constitutional framework

The Commonwealth has sovereign rights and powers over natural resources within its territorial, coastal and marine environments.

Responsibility for coastal waters is shared between the Commonwealth and the states and territories through the *Seas and Submerged Lands Act 1973* (Cth) and the corresponding Off-Shore Settlement between both levels of government in 1979.⁵ Under the Settlement, the states and the Northern Territory exercise jurisdiction over coastal waters, airspace, sea-bed and subsoil to the extent of three nautical miles from a baseline.⁶ This baseline is generally drawn from the low water mark on the mainland, across the mouths of rivers flowing into the sea. The baseline encloses bays not more than 24 miles wide at the mouth. Where there is a group of islands, then straight base-lines are drawn to enclose islands, and the waters on the landward side are within the area of the state/territory's power.

When Australia became a federation in 1901, inland waters had already been used for decades as highways to get produce to markets. They were also very important to the states for irrigation. To reflect the states' concerns, the Constitution was silent on the issue of water resources. Therefore, according to common law principles about sovereign legislative power, this power remained with the states (Clark and Renard 1974).

The only explicit reference to water in the Commonwealth Constitution is found in s 100.

The Commonwealth, shall not, by any law or regulation of trade or commerce, abridge the right of a state or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

Commentators agree that power over water is a matter for the states (Clark and Renard 1974, Fisher 2000, Tan 2002, McKay 2006). In the Northern Territory, power is exercised over water but within limitations later discussed. However the Commonwealth may exercise power over water resources if it acts within some *other source* of legislative or executive capacity (or powers). With respect to water, the most important are:

- Laws for the government of any territory: s 122;
- Financial assistance: s 96;
- Trade and commerce with other countries and among the states: s 51(i);
- Foreign, trading or financial corporations: s 51(xx);

⁵ The settlement followed an unsuccessful challenge by the states to the *Seas and Submerged Lands Act 1973* (Cth). The Commonwealth and States and Territories enacted parallel Coastal Waters legislation in 1980.

⁶ The territorial sea adjacent to each state is defined as the 'coastal waters of the state'. In 1990 Australia's territorial sea expanded to 12 nautical miles, as proclaimed under s 7 of the *Seas and Submerged Lands Act 1973* (Cth), but this does not affect the 3 nautical mile limit of state coastal waters: Carney 2006 p 214.

- External affairs: s 51.

Water is increasingly seen as being subject to the trade and commerce power. It is not easy to deny that it has been commodified and traded in the normal course of commercial activity. As we have seen, one of the main thrusts of the NWI is to increase the tradeability of water entitlements. In this context, it is more than likely that the external affairs power could be used. In the *Tasmanian Dam* case⁷ the construction of the dam and associated works for the production of electricity was seen as a trading activity. Therefore the Commonwealth's use of power to intervene in the construction of the dam was held to be legitimate. The expansive view of the power together with the broad potential of the corporations power 'opens the way for direct Commonwealth control of a wide range of manufacturing and production activities' (Hanks 1996).

Use of the external affairs power by the Commonwealth in the area of water may also be valid. In this context the power is justifiably used as (i) water is a matter of international concern, and (ii) there are a number of international treaties and conventions which need to be implemented by legislative action. These treaties which relate to elements of water and aquatic ecosystems include the Ramsar Convention on Wetlands of International Importance, UN Convention on Biological Diversity, and the New York Convention on climate Change 1992 (Fisher, 2000).

In addition the powers used to enact the *Water Act 2007* (C'th) extend to a number of other section 51 powers such as postal telegraphic and other like services; astronomical and meteorological observations; census and statistics; and also the power to legislate for territories, incidental powers; and in particular the referral powers. A brief discussion of the Act is undertaken in 3.4.2 of this report.

A great many High Court decisions involve constitutional validity. Irrigators in the Lower Murray Groundwater scheme in NSW attempted to argue that the reduction of their water entitlements by a water sharing plan was unconstitutional as it offended that prohibition in s 100. The Commonwealth was involved in the reduction through financial assistance legislation, the *National Water Commission Act 2004* (Cth), and a Funding Agreement with states. The NSW Court of Appeal in *Arnold v Minister administering the Water Management Act 2000* [2008] NSWCA 338 upheld the use of power by the Commonwealth noting that the prohibition only applied to laws made under s 51(i) and none of the laws or agreements at issue could be characterised as a 'law or regulation of trade or commerce': para 89-93, 147-8. This decision is under appeal.

Unlike the States, the NT is subject to the legislative power of the Commonwealth under section 122 of the Commonwealth Constitution. States have a constitutional guarantee of their rights, but the NT has no such power apart from express powers granted by the Commonwealth through the *Northern Territory (Self Government) Act 1978*. The 1978 Act allowed the NT to exercise limited responsible self government. It was the federal government which 'determined the framework and scope of the new system of governance arrangements, with limited input from Territory politicians and virtually no consultation with the Territory population' (Legislative Assembly of the Northern Territory, Standing Committee on Legal and Constitutional Affairs, 2002 p3).

⁷ *Commonwealth v Tasmania* (1983) 158 CLR 1.

The NT's power over water operates in much the same manner as the states of Australia. However the 1978 Act reserves considerable procedural control for the federal government, through the requirement that *every proposed law* passed by the NT Legislative Assembly is to be presented to the Administrator of the Territory who may either assent, withhold assent or reserve the proposed law for the Governor-General's pleasure. The power to reserve proposed laws has not yet been exercised (Legislative Assembly of the Northern Territory, Standing Committee on Legal and Constitutional Affairs, 2002).

In addition, the federal government exercises control over matters such as industrial relations, uranium mining, Aboriginal land rights and the management and control of Uluru and Kakadu National Parks (Legislative Assembly of the Northern Territory, Standing Committee on Legal and Constitutional Affairs, 2002). An ordinary Act of the Commonwealth legislature may either change the 1978 Act, or any piece of legislation of the NT Legislative Assembly.⁸ Administrative and legislative powers over the NT and its residents continue to be exercised at the federal level, and may be exercised without consultation or the agreement by Territorians. A recent example is the *Northern Territory National Emergency Response Act 2007 (Cth)*.

3.2 Native title, cultural heritage legislation and water planning

Chapter 3.3 of the literature review has set out how the NWI provides for Indigenous interests in water. This section will give an overview of native title and cultural heritage legislation in respect of how they may interact with water and water planning. Specific provisions for Indigenous engagement in water planning legislation of States will be considered later in this chapter.

Since the late 19th century courts in the United States, Canada, and New Zealand have recognised the claims by Indigenous people in their countries for recognition of communal, group or jointly held property. In Australia, recognition of Indigenous rights took place only in the later part of the 20th century. It took two separate paths, both originating from litigation followed by legislation. They are:

- the land rights model; and
- the native title model.

3.2.1 Two models of title

The policy documents on water refer often to 'native title' as if there is only one homogenous form of Indigenous rights to land recognised by law. In reality there are two models of Indigenous rights. The land rights model, which was instituted earlier in time gives inalienable freehold title to the Indigenous holders. Under this model, Indigenous holders would arguably own a 'superior' form of title than someone who owns a leasehold interest in the land.

⁸ For example the Commonwealth Parliament enacted the *Euthanasia Laws Act 1997* that amended the *Northern Territory (Self Government) Act 1978*, and negated the effect of the *Rights of the Terminally Ill Act 1995* (NT).

The land rights model stemmed from the first land rights case, brought in the Northern Territory – that is, *Milirrpum v Nabalco Pty Ltd* (1971) 17 FLR 141. When this claim failed, the Commonwealth Government established an Aboriginal Land Rights Commission. In 1976 it passed the *Aboriginal Land Rights (Northern Territory) Act* (Cth) (ALRA) to recognise Indigenous land rights. Rights to the area claimed in *Milirrpum* were granted to the traditional owners (Bartlett 2004). This model was followed in other states (with the exception of WA) although land holdings were smaller. WA has a large area set aside for Aboriginal reserves but these are held under Crown control and management (Bartlett 2004).

Generally legislation under this model did not expressly provide for inland or coastal water, or other resource rights (Jackson and Morrison 2007, O'Donnell 2002, Altman 2004). However each jurisdiction has its own special features which provide for access to coastal water and inland water. For example in the NT 'sea closure' provisions of the ALRA provide for a non-exclusive right of access and use of marine resources within a 2 kilometre zone of adjacent Aboriginal land (Jackson 2004). Within this zone, commercial fishers may continue to fish under their licences, but recreational fishers and new commercial fishers must seek permission or negotiate with traditional owners. However as the claims process is 'ponderous' and weakly enforced, and as no title to the zone is conferred, few sea closure applications are made (Jackson 2006, p224).

Litigation over *land* in the inter-tidal zone and seabeds has arisen under the ALRA. Apart from references to key judgements it is beyond the scope of this report to present analysis on this issue. The claim in *Risk v Northern Territory* [2002] HCA 23, (2002) 210 CLR 392 related to the Beagle Gulf Area, between the coastline of the city of Darwin and Bathurst and Melville Islands. The High Court decided that the *seabed* of bays and gulfs within the limits of the NT could not be claimed under ALRA. There were at least three reasons for reaching that conclusion. Firstly, title under the ALRA was limited to '*land* in the NT'. There were strong textual conclusions within the legislation that that phrase does not include the seabed. Second, the nature of the interest which is granted to a Land Trust suggests that the seabed does not satisfy that definition of *land*; finally, that relevant extrinsic material and legislative history of the ALRA do not support the argument that *land* includes *seabed* below the low water mark.

Another claim relates to land in the inter-tidal zone under the ALRA. The Yolngu people are the traditional owners of parts of Arnhem Land and held some 90,000 sq. km of land and adjacent islands, by way of grants of estate in fee simple under the ALRA. This land included Blue Mud Bay. Litigation arose over their desire to determine their rights to exclude fishers from waters in the area. In *Gumana v Northern Territory* [2007] FCAFC 23, the Full Court concluded that a grant in fee simple to the low water mark made under the ALRA was intended by Parliament to confer an exclusive right over the inter-tidal zone. Therefore the *Fisheries Act 1988* (NT) has no application in areas within the boundary lines described in the grants made to the Arnhem Land Aboriginal Lands Trust around Blue Mud Bay. It follows that the Director of Fisheries has no power to grant licences for the purpose of fishing in the area.

On appeal, in *Northern Territory v Arnhem Land Aboriginal Land Trust* [2008] HCA 29, the High Court ruled that the public right to fish conferred by the common law, did not survive the enactment of the fishing legislation. Accepting that the Fisheries Act 1988 (NT) *did* apply to the area of the grant, the High Court set aside the Full Court's declaration to that effect. The crux of the matter was whether the grants made under the ALRA permit the Land Trust to exclude persons who hold a fishing licence from

entering waters that lie within the boundaries of the grant. The High Court accepted that grants to the Land Trust related to a geographical area and entry within the boundaries of that area (whether covered by tidal waters or not) was prohibited by s 70 of the ALRA. Thus the Director of Fisheries had no power under the Fisheries Act 1988 (NT) to grant fishing licences in areas of the grant. This included the inter-tidal zone, which is the area of land covered and uncovered by water at different times of the day, and tidal waters which extends to rivers and estuaries affected by the ebb and flow of the tides. This decision confirms that Indigenous people hold exclusive rights to the inter-tidal zone of up to 80% of the NT coastline.

Inter-tidal claims may also be available in Queensland. The land claim process pursuant to the *Aboriginal Land Act 1991 (Qld)* and the *Torres Strait Islander Land Act 1991 (Qld)* is handled administratively and is relatively simple. Land is generally held by trustees for the benefit of the relevant groups. Land under this model may be held in fee simple, with a reservation to the Crown of all minerals or petroleum on or below the land, and may also have a reservation regarding forest products or quarry material. This is akin to other freehold title. Only certain dealings over the land are permitted, and only with the terms of the proposed dealing first being explained to the people affected, who must be given opportunity to express their views on the proposal (Macdonald et al 2005). Title may be held over 'tidal land' which is defined as 'land that is ordinarily covered and uncovered by the flow and ebb of the tide at spring tides': s 3. But the opportunity for claiming tidal land is small. Claims may only be made if the particular tidal land is declared by regulation to be available Crown land: s 21. In relation to water resources, the most significant feature about the Queensland land rights legislation is the potential for land rights to exist over beds and banks of watercourses and lakes which are found on available Crown land: s 20.

The second model of Indigenous title to land and water originates from the *Mabo* decision by the High Court in 1992. The decision established that the common law would recognise and protect a form of 'native title' held by Indigenous Australians in their traditional lands in accordance with their traditional laws and customs: *Mabo v Queensland (No 2)* (1992) 175 CLR 1. Following that decision, the *Native Title Act 1993 (Cth)* established a form of title, provided administrative processes for determining claims, validated types of past actions of government which extinguished native title, and provided compensation where title was extinguished. The Act survived an early challenge to its validity by the WA Government in 1994. Claims to native title are now invariably brought under the 1993 Act instead of the common law.

Principles relating to the proof and extinguishment of native title established by *Mabo* have been reformulated by legal and political developments since 1993. Important points to note in relation to our present discussion are:

- 'Native title' is defined under the 1993 Act as the rights and interests possessed under the traditional laws acknowledged, and the traditional customs observed, by the Aboriginal peoples or Torres Strait Islanders; and where they have a connection with the land; and these rights and interests are recognised by the common law of Australia.
- Native title extends to waters as well as land. 'Waters' is defined to include - '(a) sea, a river, a lake, a tidal inlet, a bay, an estuary, a harbour or subterranean waters; or (b) the bed or subsoil under, or airspace over, any waters (including waters mentioned in paragraph (a)); or (c) the shore, or subsoil under or airspace over the shore, between high water and low water.' S 222, *Native Title Act 1993 (Cth)*.

- Rights and interests which are recognised and protected include hunting, gathering, and fishing.
- Native title rights are generally held communally by the claimant group under the terms of the traditional law and customs.
- Under common law, native title rights are generally deemed inalienable on the basis that traditional law and custom would not have permitted the disposition or trading of rights to others not within the traditional group.

As noted above, native title can exist over *sea-country* under the NTA. Two additional points have been made in relation to this. Firstly, claims to the seabed, territorial waters or the inter-tidal zone, even if successful are so far regarded as non-exclusive. The High Court in *Commonwealth v Yarmirr* 2001 HCA 56; (2001) 208 CLR 1 found insufficient evidence to a demonstrated right under traditional law and custom to exclusive fishery, and to the right of exclusive possession around the seas of Croker Island. Second, these claims can only exist to the extent that the rights are not inconsistent with other established rights, particularly public rights to fish and to navigate, and international right of innocent passage in territorial sea.

It should be further noted that the terms '*native title*' or '*native title and interests*' have been defined by s 223 (2) of the NTA 1993 also to mean rights and interests that have been at any time in the past, compulsorily converted into, or replaced by, statutory rights and interests in relation to the same land or waters that are held by or on behalf of Aboriginal peoples or Torres Strait Islanders. This definition confers a generic meaning to those terms, and extends the '*native title*' to the land rights model. The extension of the terms is confusing as the land rights model as earlier discussed, confers title of a different form and content.

For the purpose of clarity, in this report, the term '*native title*' will be used to refer to generic native title and interests. Where discussion is specific to rights and interests arising out of the NTA 1993, that distinction will be made clear.

3.2.2 Establishing native title under the Native Title Act

A test approved by the High Court in *Yorta Yorta Aboriginal Community v Victoria* (2002) 194 ALR 538 requires evidence by native title claimants of a 'continuing connection' to the land. This connection is proven by continued existence of a society that preceded British sovereignty; and acknowledgement and observance of laws which existed at the time of sovereignty, and continued till the time of claim. The High Court also accepted the trial judge's assessment of evidence which favoured written European commentary written in the 19th century over oral Aboriginal history and reports by anthropologists, historians and linguists (Bartlett 2004, p81). This test of continuing connection to the land has raised the bar for native title claimants and has been criticised by the Human Rights and Equal Opportunity Commission in their recent Native Title Report (Aboriginal and Torres Strait Islander Social Justice Commissioner 2008).

The content of native title as conferred by the NTA 1993 is determined by the relationship of the traditional society under its laws and customs to the territory. If the traditional relationship to water was exclusive then it is arguable that native title should extend to all uses of water. This requires proof of exclusive use and enjoyment prior to the acquisition of sovereignty and evidence of current practices. 'Exclusive use' of land is characterised as the right to possess, occupy, use and enjoy the land and its resources and to control access to it: *Mabo v Queensland*

(1992) 175 CLR 1. In terms of *flowing* water, exclusive use is not as easy to characterise. Control of access via land may be the key to a finding of 'exclusive use' of water.

The High Court in *Western Australia v Ward* (2002) 213 CLR 1 required 'the particularisation of each and every element of traditional law and custom, stifling any larger claim to a more global or comprehensive right' (Bartlett 2004, p 212). In reaching this decision, the court rejected the notion that a group of people which occupied an area at sovereignty could be presumed to be 'owners' of an area. Rights and interests that constitute native title were considered a 'bundle of rights'. This understanding of native title is particularly relevant where extinguishment has occurred for the purpose of determining which right or interests have been extinguished.

To this date native title to waters under the NTA 1993 has been determined for limited non-exclusive and non-commercial use. The Federal Court considered that a right to take water for drinking and domestic use is a necessary incident to life in the exercise of other rights such as access, camping, hunting and foraging: *Daniel v WA* [2003] FCA 666. On appeal to the Full Federal Court in *Moses v WA* year [FCAFC] 78, that decision was upheld.

There are calls from various commentators that native title rights should include commercial rights to water but this has not been recognised by our courts (Durette 2008). Altman, Langton and others have drawn attention to the need for Indigenous economic rights over water (Altman 2004, Langton 2002). Jurisprudence in Australia has not followed that in the US and Canada. The US Supreme Court recognises the 'reserved rights doctrine' which means that where reserves have been set up for Indian tribes, the reservation comes with water rights sufficient to meet the tribes' present and future needs (Getches and Van de Wetering, 2005). In principle Indian water rights allow for irrigation and other contemporary use (Durette, 2008).

3.2.3 Extinguishment of native title

Certain kinds of dealings over traditional land may extinguish native title held under the NTA 1993. The legislation authorises States and Territories to enact legislation to validate their own previous dealings over land on the same terms which apply under Commonwealth legislation. Parallel legislation is now in place in all States.

The statutory framework for extinguishment is complex and highly technical. In its original form, the NTA 1993 provided for validation of 'past acts' of the State which fell into four different categories. These categories determined the extent to which native title was extinguished, and also provided for compensation for where this had occurred.

In addition, the 'future acts' regime applies to proposals to carry out activity/activities over land and waters which are subject to registered native title claims. Unless a future act is authorised by the statutory scheme, that act/activity is invalid to the extent it affects native title. A range of categories of permissible future acts are found. Where permissible future acts extinguish native title or create interests which are inconsistent with Native title, compensation must be paid. The most important categories of permissible future acts are mining and infrastructure development. Where a future act relates to mining and compulsory acquisition of land for the benefit of third parties, registered native title claimants have a right to negotiate with government and the proposed third parties with a view to agreement on conditions under which the activity/activities may take place.

The current statutory framework for extinguishment was enacted as a response to *Wik Peoples v Queensland* (1996) 187 CLR 1 which concerned claims to native title at common law in far Northern Queensland. The High Court decided that the grant of pastoral leases did not necessarily extinguish native title. In deciding questions of extinguishment we are to look at the legislation governing the administrative grant in question and the 'instrument' by which the action took place, and consider the effect those had on native title rights and interests. Amendments to the Act in 1998 resulted in additional layers of complexity, with an additional classification of 'intermediate period acts' and confirmation of extinguishment provisions.

Since 1993, all future development which *affects native title* (including the building of water infrastructure such as dams, pipelines, and canals) will need to comply with the 'future acts regime'. An activity or legislation is taken to affect native title 'if it extinguishes the native title rights and interests or if it is otherwise wholly or partly inconsistent with their continued existence, enjoyment or exercise': s 277, NTA. If the future act takes place over land which native title does not exist, or has been extinguished, then the future act regime does not apply.

Infrastructure development over land where native title exists is likely to, at the very least, be partly inconsistent with the titleholders continued enjoyment of title. As an analogy, the extension of a mineral exploration licence was held to be a future act which affects native title: *Mineralogy Pty Ltd v NNTT* (1997) 150 ALR 467 at p484-6.

Where a future act affects native title, it may either be a valid act or invalid act. It will be valid if covered by an Indigenous land use agreement (ILUA see below) or validating provisions found within the NTA. With regard to water, s 24HA applies. Important points to note are:

- The provision relates to surface and subterranean water or living aquatic resources.
- 'Water' means water in all its forms.
- The NTA validates future acts consisting of the making, amendment or repeal of legislation.
- The NTA validates future acts consisting of management or regulation of water including grants of lease, licence, permit or authority to access water or to take water.
- Any future act does not extinguish native title.
- If the activity impacts on native title, the native title holders concerned are entitled to compensation – payable by either the Commonwealth or the State/Territory.
- A notification process is required, with the registered native title claimant or title holder having the right to comment on the proposal.

The validating provision does not apply to the building of infrastructure. In these circumstances, any proposed developer including the State, Territory or the Commonwealth will need to enter an ILUA to validate the action.

3.2.4 Agreement making under the Native Title Act

The 1998 amendments also introduced Indigenous land use agreements (ILUA) to provide for statutory certainty and enforceability for negotiated agreements.⁹ It may be argued that these provisions were a response to very strong statements from superior courts about the importance of native title agreements.¹⁰ Since then the ILUA has proven to be a significant mechanism. The provisions of the NTA on this matter, like every other aspect of the NTA, are complex and detailed. The relevant points are:

- Not every agreement negotiated with Indigenous people is an ILUA. The Act provides for three types of ILUAs, and prerequisite conditions.
- All potential native title holders must be identified. They must be informed of the ILUA and involved in the process. Negotiating with one group but not including all people who may assert they hold native title interest may place an agreement at risk as these individuals or groups may object to the registration of the agreement with the result that the agreement may not be authorised or certified under the Act.
- Once an ILUA is registered it binds all persons holding native title in relation to any or all of the land and waters in the area covered by the agreement *even if they were not parties to the agreement*: S 24 EA(1)(b).
- An ILUA may be made separately from a native title determination, but may also be part of, or a step in the formal native title process.

Under the strict test imposed by the decision in *Yorta Yorta*, difficulties are faced by many native title claimants. For example, in *De Rose v South Australia* [2002] FCA 1342, the claim failed because of a failure to prove a continuing connection with the land after 1978. Considering these difficulties it may be that most Indigenous people will not be recognised as native title holders (Bogan and Hicks, 2006).

Given the high transaction costs of litigation and uncertainty of claims, commentators suggest that negotiated agreements are most likely to satisfy the range of co-existing interests (see for example Jackson and Morrison 2007, Langton and Palmer 2003, Altman 2004). This is so even though the ILUA process has been criticised as onerous and complex, and the implementation of ILUAs requires persistence and resources. All parties need to 'embrace cross-cultural learning, the development of new capabilities and a mutual understanding and respect' (Crooke et al 2006, p111).

The utility of ILUAs finds support from the fact that, as at 31 December 2007, there are 310 registered ILUAs.¹¹ By far, Queensland leads the number of registered agreements with 166, and there are 82 in the NT, and 9 in WA. On the whole agreements are less costly (in financial, personal and temporal terms), more flexible in terms of process, and are able to be far more comprehensive in scope than the

⁹ There are a range of other agreements available: ss 31, 41, NTA. See

¹⁰ See for example *North Ganalanja Aboriginal Corporation v Queensland* (1996) 185 CLR 595 at p617; *Fejo v Northern Territory* (1998) 195 CLR 96, p134.

¹¹ Of the 287 ILUAs 262 are Area Agreements, with the remaining being alternative procedure agreements. These two types relate to areas where native title determinations have not been made over the entire area. Body corporate agreements relate to areas where determinations have been made and there are registered native title bodies in relation to the areas. So far there have not been body corporate agreements registered. See http://www/nntt.gov.au/ilua/browse_ilua.html (accessed 4/09/2007).

often necessarily narrow judgements handed down by courts (Neate 2004, Edmunds and Smith undated). Parties are able to deal directly with each other, thereby giving the opportunity to build relationships (Agius et al. 2004) and engage in creative solutions that allow the expansion of Indigenous interests in social, political and economic terms (Palmer 2004).

Among the most significant ILUAs is the Ord Final Agreement which arose from the two native title claims of the Miriuwung Gajerrong (MG) people over the land and waters in the East Kimberly. The earlier claim, MG#1 was determined by the Full Federal Court in December 2003 and the MG#1 Native Title Prescribed Body Corporate was registered as Native Title owner of claim land. The other claim, over land in WA and NT, was known as MG#4. It was also subject to years of litigation, eventually reaching the High Court as *Western Australia v Ward* (2002) 213 CLR 1. The High Court's decision narrowed the content of native title, and focused on the nature and principles of extinguishment. The substantive matter was sent to the Full Federal Court for further determination as to whether native title had in fact been extinguished.

The Miriuwung Gajerrong people considered the Aboriginal Heritage Act 1972 (WA) as a 'key instrument' (Jackson 2006, 67).¹² They started mapping culturally important sites along the river as a strategy to 'try and incorporate cultural values in the decision-making/planning process'. The WA Water and Rivers Commission commissioned a study of the Aboriginal cultural, environmental social and economic values of the Ord river and associated floodplains and wetlands (Barber and Rumley, 2003). However Barber considered that this process did not 'solve the water issue, nor the legacies from the past development of two dams and an irrigation scheme (Jackson 2006, 68). Although cultural heritage issue did not directly lead to water allocations for claimants, the value of such cultural heritage reports may lie in the negotiations for ILUAs.

In this context negotiations were initiated in September 2003, between the State of WA and the Miriuwung Gajerrong people. Talks culminated in the Ord Final Agreement registered as an ILUA in 16 August 2006. The agreement resolves issues relating to native title claim of land around the Kimberly area; land for the development of Ord Stage 2 irrigation area; social and economic issues relating to Ord Stage 1 irrigation area that have impacted on the traditional owners; and a compensation package to be paid for the extinguishment of native title. The Ord Final Agreement specifically dealt with cultural heritage and protected sites by creating reserve areas. Title to water resources was not specifically dealt with in the Agreement. Instead provisions allow the MG people intensive agricultural farmland in future development (including the Ord Stage II development areas) that comes with an allocation of water: Recital X, clause 48.2, Ord Final Agreement.

3.2.5 Cultural heritage protection

In an assessment carried out by ATSIC in 1999, cultural heritage laws were seen as 'inadequate in their application to all aspects of Indigenous cultural and intellectual property and do not recognise many rights Indigenous people believe are important

¹² All states have general cultural heritage legislation: for example *NT Heritage Conservation Act 2000*. In addition jurisdictions also have special Aboriginal legislation regarding cultural heritage, for example, the *NT Aboriginal Sacred Sites Act 1989* (NT), the *Aboriginal Cultural Heritage Act 2003* (Qld) and *Aboriginal Heritage Act 1972* (WA).

for the continuation of their culture' (Frankel and Janke, 1998: XXIV). The system generally relies on permits for surveys and excavations involving cultural heritage. The common inadequacies of the system are seen as:

- Ownership of cultural heritage is often vested in a government minister rather than in the appropriate Indigenous community.
- The focus of cultural heritage laws is on tangible cultural heritage, such as specific areas, objects and sites. The intangible aspects of a significant site, such as its associated stories, songs and dreaming tracks, are not protected.
- The focus is on past heritage rather than living heritage.
- The emphasis for protection is scientific and/or historical value, rather than cultural and spiritual values.
- The onus is on the relevant government minister to take action to protect;
- Indigenous participation in decision-making is usually limited (Frankel and Janke, 1998)

The above refers to cultural heritage laws in general. Cultural heritage protection may have more significance in water planning under the Queensland regime. The *Aboriginal Cultural Heritage Act 2003 (Qld)* (ACH Act) is said to be a 'quantum leap' in the model for Indigenous heritage protection (Singleton, 2003/2004, 190). Protection may extend to cover not only objects of cultural heritage but also significant areas, even where no artefacts or markings are present (section 8). Meeting places, a birthing place, or other areas of archaeological or historic significance are capable of being protected (section 11). The criterion of significance is determined by reference to Aboriginal tradition or history (section 9). Thus, although the Act still does not protect intangible cultural property, it does provide for an extended definition of cultural heritage.

For present purposes, the key provisions in the Act are that all persons and organisations (including the State) are bound by the Act and owe a duty of care to take all reasonable and practicable measures to ensure their activities do not harm Aboriginal cultural heritage: s 23(1). Matters which are to be considered in determining whether the duty of care requirement has been complied with include:

- The nature of the activity;
- The nature of the Aboriginal cultural heritage;
- The extent and results of consultation with Aboriginal parties about carrying out the activity;
- Whether there was a study or survey of the area to determine Aboriginal cultural heritage issues;
- Compliance with cultural heritage guidelines.

This duty of care requirement may be complied with in several ways. It imposes an onus on persons proposing an activity to assess the risk of harm. Compliance may require a risk management decision showing that the proponent has taken sufficient measures to satisfy that duty. Compliance may further involve a cultural heritage management plan (CHMP) formulated through a statutory process involving consultation with Aboriginal parties. The term 'Aboriginal party' is widely defined to include a registered native title holder or registered native title claimant. In the absence of such registered parties, then the term will extend to an Aboriginal person with particular knowledge about traditions of the area and who is recognised as having responsibility under Aboriginal tradition for some of that area (s 35).

Under this new model of Aboriginal cultural heritage protection, there is an onus on the state to involve Aboriginal parties in decision-making where cultural heritage may be affected. At an individual project level, compliance is achieved through specific measures. Guidelines gazetted in 2004 identify reasonable and practicable measures designed to ensure that activities are managed in a way that meets the duty of care requirements under the ACH Act. The Guidelines provide for 5 categories of activities:

- Category 1: activities involving no surface disturbance;
- Category 2: activities causing no additional surface disturbance;
- Category 3: activities in developed areas;
- Category 4: activities in areas previously subject to significant ground disturbance; and
- Category 5: any activity that does not fall within 1-4 is an activity that causes additional surface disturbance.

For activities under categories 2 and 4, if at anytime it is necessary to excavate, relocate, remove, or harm a cultural heritage or object/s or site of cultural heritage significance, the activity is to cease and agreement should be reached with an Aboriginal party for the area. In the absence of an agreement, the duty of care obligation under the ACH Act applies.

Category 5 activities are considered high risk, and should not proceed without cultural heritage assessment. Particular care should be taken where activities are likely to impact on features of cultural heritage significance (para 5.15 of Guidelines). Water-related features include: fish traps and weirs; contact sites such as former or current Aboriginal missions; rock wells; landscape features such as natural wetlands, and permanent or semi-permanent water holes; natural springs; and particular types of natural vegetation. (para 6 of Guidelines).

A CHMP is mandatory where a licence and an Environmental Impact Statement are required for a project; where approval under the *Integrated Planning Act 1997* (Qld) is required and the NRW is a referral agency; and where leases, licences, permits or approvals are required in addition to environmental authority: ss 97 and 89. A CHMP is not required if a Native Title Agreement is in place unless Aboriginal cultural heritage is expressly excluded from that agreement.

Approval of a CHMP is gained through a program of consultation between the sponsor (the person/organisation undertaking the activity) and the Aboriginal parties, with final approval by the Chief Executive of the NRW. If agreement is not reached or approval is not given, then mediation and appeal processes follow. The Land Court (previously the Land and Resources Tribunal) has jurisdiction over Aboriginal cultural heritage matters in respect of mediation and injunctions.¹³

Some water planning scenarios may fall within category 5, for example where the implementation of a water plan could result in 'surface disturbance' – defined to mean 'any disturbance of an area which causes a lasting impact to the land and waters during the activity or after the activity has ceased.' (s 3 of Guidelines). If water planning outcomes or implementation results result in deterioration of cultural heritage sites where water is featured, or impacts on water-related landscape features then agreement with an Aboriginal party is required.

¹³ As of 21 September 2007 this jurisdiction was transferred from the Land and Resources Tribunal.

Although Jackson and Morrison state that they are 'not aware of any instances where heritage legislation has been applied to protect significant sites from the adverse effects of water trading' (2007, 28), at a strategic level the duty of care under the ACH Act may be of considerable importance to Indigenous groups in Queensland. Under the Queensland model, a due-diligence assessment may be required for proponents to study compliance to the cultural heritage duty of care. Such studies have been commissioned (see for example ARCHAEO Cultural Heritage Services 2005).

3.3 Recent Commonwealth policy and legislation

3.3.1 National Plan for Water

In early January 2007, Prime Minister Howard announced the Commonwealth Government's \$10 billion National Plan for Water Security. Citing the severity of the drought in South Eastern Australia, various factors such as climate change and changes in land use reducing inflows in the catchments, the Commonwealth proposed new governance arrangements 'to ensure decisions affecting it are made promptly and with a Basin-wide perspective'. The Plan focused primarily on issues in the south-east of Australia, specifically the Murray-Darling Basin.

This major investment in water security was aimed at improving water efficiency and addressing over-allocation of water in rural Australia through targeted works in key areas namely:

- modernising irrigation by reducing the loss of water (mainly in the Murray-Darling Basin) through leakage and evaporation, and obtaining efficiencies through updating outmoded irrigation methods. The funds will also improve metering, monitoring and accounting of water and improve the efficiency of river flow and water storage operations. The target is to achieve 25% savings in total irrigation water use (\$6 billion over 10 years);
- addressing over-allocation in the Murray-Darling Basin including reconfiguring irrigation systems, retiring non-viable areas, providing structural adjustment assistance, and using water saved to restore the health of rivers and wetlands (\$3 billion);
- reforming governance in the Murray-Darling Basin (\$600 million);
- developing capacity to enable management, interpretation and free public access to water information (\$480 million);
- examining future land and water development in Northern Australia;
- ensuring a sustainable future in the Great Artesian Basin through further investment in works (\$85 million) (Commonwealth Government of Australia 2007a, Commonwealth Government of Australia 2007b).

The overwhelming focus of spending under the Water Security Plan is on irrigation works in the Murray-Darling Basin. Over 60% of total funds are allocated for irrigation efficiency, and 30% of total funds are for addressing overallocation in the Murray-Darling Basin. Although the Plan mentions development of Northern Australia, there do not seem to be any funds allocated to this. A Northern Australian Taskforce was set up and with the change in Commonwealth Government in November 2007, there has been a change in the membership and strategic focus of the Taskforce. There does not appear to be any change in the allocation of funds for land and water development in Northern Australia.

Major aspects of the Howard \$10 billion plan are intact. The new Rudd government boosted funds to \$12.9 billion, and renamed the program *Water for the Future*. Of that increased sum it appears that over the next five years, \$2.3 billion will be spent to address climate change. These new arrangements are briefly discussed in the latter part of the next section.

3.3.2 Commonwealth Water Act 2007

The *Water Act* 2007 gives effect to a number of key elements of the Commonwealth Government's National Plan for Water Security. Because of Victoria's refusal to refer its power, the Commonwealth has relied mainly on the trade and commerce power, corporations power, and their external affairs power to assert jurisdiction over the above key elements.¹⁴ The commentary in the following paragraphs reflects the law as it stands on 26 March 2008. With the change of Commonwealth government in late 2007 the water pact was renegotiated, with Victoria agreeing to enter the pact in early 2008. Resulting amendments to the Act are being debated in late 2008 and proposed changes are briefly flagged.

Except for aspects relating to northern Australia and the Great Artesian Basin which do not need legislative backing, the Act reflects the Plan. The \$10 billion investment under the National Plan for Water Security is not specifically addressed in the Act.

Firstly the new Act clarifies the interaction between Commonwealth water legislation and State laws. It does not exclude or limit the concurrent operation of any state law: s 15(1). There is no change in the Constitutional framework and general power over water will remain vested in the Crown in the right of particular states. This means that water entitlements issued by states are not affected in any way. Provisions of state water legislation relating to offences are also unaffected. In further protection of state power, the state may declare any matter to be an excluded matter: s 16. It is not necessary for a state to exclude specific matters such as setting of water charges from the Commonwealth legislation. The *Water Act* provides that regulated water charge rules apply only to Basin water resources, related infrastructure or water rights: ss 91 and 92. If there is direct inconsistency between the Commonwealth water legislation and state law, then the former will prevail: s 15(3).

There is no change in the interaction between the Commonwealth and the Northern Territory's law on water. The Commonwealth *Water Act* does not refer to the NT at all. This is primarily because the *Water Act* is focused on Murray-Darling issues. In addition, under the Federal Constitution, the Commonwealth retains legislative power over the NT, including the power to override any existing NT water legislation (see 3.1 above). Unless this power is exercised, power over water in the NT remains vested in the Territory.

Secondly the Act establishes an independent Murray-Darling Basin Authority (MDBA) with the functions and powers, including enforcement powers, needed to ensure that Basin water resources are managed in an integrated and sustainable way. The MDBA and the Basin Plan does not affect Northern Australia. The principles which have been adopted are worth noting:

¹⁴ Section 9, *Water Act* 2007 (Cth) specifically relies on other powers namely postal, telegraphic and other like services (para v of the Commonwealth of Australia Constitution); astronomical and meteorological observations (para viii); census and statistics (para xi); weights and measures (para xv); incidental powers (para xxxix), power to legislate for Territories (s 122) and any implied legislative powers of the Commonwealth.

- sustainable limits must be set on the taking of water from surface and groundwater systems across the Basin;
- water resources in the Basin must be measured and monitored;
- the community must be engaged in the management of the Basin's resources; and
- there is mandatory content for the Basin Plan which includes limits on the amount of water that can be taken from Basin water resources on a sustainable basis, identification of risks to Basin water resources, such as climate change, and strategies to manage those risks; and an environmental watering plan to optimise environmental outcomes for the Basin by specifying environmental objectives, watering priorities and targets for Basin water resources.

Thirdly, the Act establishes a Commonwealth Environmental Water Holder to manage the Commonwealth's environmental water. This involves protecting and restoring the environmental assets of the Murray-Darling Basin, and outside the Basin where the Commonwealth owns water. In the Murray-Darling Basin, these holdings will be managed consistently with the Environmental Watering Plan that will be developed by the Murray-Darling Basin Authority in consultation with state governments and stakeholders. It is conceivable that should the Commonwealth exercise control over NT's water, the Commonwealth Environmental Water Holder will have a role to play there.

Currently, arrangements for water management and allocation in Northern Australia are not directly affected by the National Plan for Water Security and the *Water Act 2007* (Cth). Announcements of financial commitments appear narrowly focused on irrigation issues in the Murray-Darling Basin. Under the Howard version of the plan, 90% of funding under the National Plan focuses on irrigation issues important for that region. The new Rudd government is likely to spend even more on this region and sector. Analysis of the Commonwealth financial arrangements is not within the scope of this report.

In March 2008 an understanding was reached between the Commonwealth and the Basin states, namely NSW, Victoria, Queensland, South Australia and the ACT governments.¹⁵ The key additional terms include the continuation of the States' roles in setting annual water allocations; and an in-principle commitment from the Commonwealth to invest up to \$1 billion in Stage 2 of the Foodbowl Project in Victoria. The latter would return 100 billion litres of water to the Murray River and an equivalent volume of water to farmers in the Goulburn Valley region.

The scope of new arrangements was clarified in an Intergovernmental Agreement on Murray-Darling Basin Reform in July 2008. Legislation providing for a limited referral of state powers to the Commonwealth will be enacted to implement reform which includes:

- the making of a Basin Plan by early 2011;
- new governance arrangements allowing for Commonwealth control of water management in the Basin;
- the Commonwealth taking on aspects of state liabilities under the NWI risk assignment framework; and
- the ability of States to cause water market and water charge rules to be applied outside of the Basin.

¹⁵ Senator Penny Wong, Minister for Climate Change and Water, 'Murray Darling deal delivered' Media Release, 26 March 2008, <http://www.environment.gov.au/minister/wong/2008/pubs/mr20080326.pdf>

The new Basin Plan will provide for critical human needs. Although the term refers to *human* needs this new concept refers to the 'minimum amount of water that can only reasonably be provided to meet (a) core human consumption requirements in urban and rural areas; and (b) those non-human consumption requirements that a failure to meet would cause prohibitively high social, economic or national security costs'. Thus defined, it would appear the prospect of a large scale failure to provide water for environmental or ecosystem needs could be considered a critical human need.

The most relevant points for water planning are:

- (1) the Basin Plan will have primary effect;
- (2) there are 3 components to the Plan namely (i) Sustainable Diversion limits, (ii) environmental water and (iii) water quality and salinity management, with all needing to be integrated and consistent;
- (3) the Authority will consult widely in making, amending and reviewing the Basin Plan;
- (4) there will be a three-step system for sharing water in a Basin Plan, ranging from 'normal' water availability, low flow periods to extreme and unprecedented circumstances.

The Intergovernmental Agreement of Murray-Darling Reform was hailed as providing a 'new era of cooperation between governments aimed at saving the Murray-Darling Basin' when amendments were introduced in the Commonwealth Parliament on 25 September 2008.¹⁶ By 14 November 2008, New South Wales, South Australia and Queensland had passed the necessary supporting legislation.¹⁷

¹⁶ 25 September 2008, *Sydney Morning Herald*.

¹⁷ Murray-Darling Basin Ministerial Council, *Communique*, 14 November 2008, Canberra.

4. Requirements for statutory planning

The Intergovernmental Agreement on a National Water Initiative was signed by most Australian governments in 2004, Tasmania in 2005 and WA in 2006. It builds on the previous Council of Australian Governments (CoAG) framework for water reform signed by the Australian Government and all state and territory governments in 1994 (CoAG 1994). While acknowledging that there are other natural resource management initiatives and agreements in place that impact on water, all governments committed themselves to the pre-eminence of the NWI. It is to be implemented over a ten year period.

The NWI Agreement seeks to achieve a nationally-compatible water trading system and to that end states that entitlements are to be exclusive, tradeable, enforceable, defined separately from land and as a perpetual share of a specified water resource. Registers of entitlements are to be set up. Among an extensive list of measures, the NWI seeks to remove institutional barriers to permanent trades by 2014. Effective water planning is critical to the NWI outcomes and is the instrument which resolves the tensions between delivering a highly specified 'product' for trade while at the same time providing for sustainable management.

Achievement of the central objectives of the reform depends on comprehensive planning systems. In 1995 it was thought that planning systems needed to be 'based on full basin-wide hydrological assessment of the resource' (ARMCANZ 1995 p5). The CoAG 1994 framework called for a less rigorous assessment process which required specific allocation to the environment, determined, wherever possible, by the best scientific information available (Working Group on Water Resource Policy, 1995). Under the NWI, the level of hydrological assessment as well as the specification of detail required for planning has been left for each State or Territory to determine, based on an assessment of the degree of development of water systems, projected future consumptive demand and the risks of not having a detailed plan (NWI para 38).

The NWI is not an easy document to read. It is multi-layered, complex and detailed, with over-lapping provisions. To navigate through the document we need to consider its preamble, objectives, elements, outcomes and actions.

4.1 NWI objectives and social values

The preamble sets out the grounds and intentions of the NWI. It is often the part of a document that receives the least attention, but it may be helpful in informing the legal interpretation of statutes. Courts will consider a Preamble and statements of objectives when attempting to ascertain the meaning of the operative parts of the document, especially if a provision is uncertain or ambiguous (Pearce and Geddes 1996). In general 'a particular section must be seen in its context; the whole statute must be read as a whole and recourse to the preamble may throw light on the statutory purpose and object' (*Wacondo v Commonwealth* (1981) 37 ALR 317, per Mason J at p. 333).

Paragraph 2 of the preamble explicitly refers to social values and the critical part they play in water management. Noting that water is used for a variety of purposes, the preamble unequivocally states that decision-making over water involves 'balancing

sets of economic, environmental and other interests'. It affirms all governments have an obligation 'to ensure that water is allocated and used to achieve socially and economically beneficial outcomes in a manner that is environmentally sustainable'.

This intention is further supported by the NWI's objectives found in Clause 23:

- i. clear and nationally-compatible characteristics for secure water access entitlements;
- ii. *transparent, statutory-based water planning*;
- iii. statutory provision for *environmental and other public benefit outcomes*, and improved environmental management practices;
- iv. complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction;
- v. progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place;
- vi. clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool;
- vii. water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;
- viii. policy settings which facilitate water use efficiency and innovation in urban and rural areas;
- ix. *addressing future adjustment issues that may impact on water users and communities*; and
- x. recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource (emphasis added).

In achieving the objectives, the NWI commits governments to outcomes and agreed actions, and an implementation schedule in eight inter-related elements of water management:

- i. water access entitlements and planning framework
- ii. water markets and trading
- iii. best practice water pricing
- iv. integrated management of water for environmental and other public benefit outcomes
- v. water resource accounting
- vi. urban water reform
- vii. knowledge and capacity building
- viii. community partnerships and social adjustment.

'Public benefit outcomes' is a term frequently referred to within the NWI, and used in conjunction with environmental outcomes. It is explained thus:

- environmental and other public benefit outcomes are defined as part of the water planning process, are specified in water plans and may include a number of aspects, including:
 - *environmental outcomes*: maintaining ecosystem function (eg. through periodic inundation of floodplain wetlands); biodiversity, water quality; river health targets;
 - *other public benefits*: mitigating pollution, public health (eg. limiting noxious algal blooms), indigenous and cultural values, recreation, fisheries, tourism, navigation and amenity values: NWI, Schedule B(ii).

From the explanation and other NWI provisions we note:

- Public benefit clearly encompasses a wide range of values, these values being sets of ideals and beliefs to which people individually and collectively aspire and which they desire to hold (see discussion in the Literature Review, Volume 1, Chapter 3.2).
- Public benefits outcomes, as the NWI intends, are identified through water planning processes: NWI para 35.
- Water management arrangements required to meet public benefit outcomes must be defined within water plans: NWI para 35(ii)
- Water to meet the agreed public benefit outcomes is to be given statutory recognition and at least the same degree of security as water access entitlements for consumptive use: NWI para 35(i).
- Any entitlements for public benefit outcomes need to be fully accounted for: NWI para 35(i).
- Any entitlements for public benefit outcomes may also be tradeable when not required to meet those outcomes, provided trading is consistent with those outcomes: NWI para 35(iii).

Water planning is the *only* mechanism contemplated under the NWI for constructing the public benefit outcomes desired by a particular community. Knowing this makes it all the more important that the objective of open and transparent processes is achieved. To underscore this point, element (iv), the integrated management of water, requires that states establish effective and efficient management and institutional arrangements to ensure the achievement of environmental and other public benefit outcomes: NWI para 79. Social and economic values and how they are understood and currently addressed in water management have been dealt with more fully in Chapter 3.2 of the literature review of this project.

One way to understand the provisions of the NWI in relation to water planning is to focus on key actions and their timelines for implementation. All jurisdictions have developed Implementation Plans that set out how they would proceed on the key actions. These implementation plans have been accredited by the NWC, with NSW, NT and Qld's plans accredited in 2006, and WA in 2007. The accreditation of plans means that the NWC considers that the plan provides a good basis for implementing the NWI. These plans provide the jurisdiction's own benchmarks for the NWC's biennial assessment of progress. A knowledge of the key actions helps in understanding the 2007 NWC biennial assessment, and previous assessments by its predecessors in this function – the National Competition Council and the Productivity Commission. A table of key actions appears as Appendix 2 to this report.

Another way to understand the provisions of the NWI in relation to consultation in water planning is to focus on its provisions in terms of processes, outputs and outcomes (see Hamstead et al, 2008).

Table 1: Relevant NWI provisions for consultation in water planning

<p>Processes</p> <ul style="list-style-type: none">• Consultation with stakeholders including those within or downstream of the plan area: Sched. E cl 6(i)• Adequate opportunity for consumptive use, environmental, cultural and other public benefits to be identified and considered in an open and transparent way: Sched. E cl 6(iii)• Include Indigenous representation in water planning: cl 52• Incorporate Indigenous social, spiritual and customary objectives into planning and strategies for achieving these objectives: cl 52• take account of the possible existence of native title rights to water in the catchment or aquifer area: cl 53.• Settling the trade-offs between competing outcomes for water systems' involving 'judgements informed by best available science, socio-economic analysis and community input': cl 36• Reference to broader regional natural resource management planning processes: Sched. E cl 6(iv)• Consideration of, and synchronisation with, cross-jurisdictional water planning cycles: Sched. E cl 6(v)• Ensuring accurate and timely information is available to all sectors/stakeholders at key decision points, particularly<ul style="list-style-type: none">– progress with the implementation of <i>water plans</i>, including the achievement of objectives and likely future trends regarding the size of the consumptive pool; and– other issues relevant to the security of <i>water access entitlements</i> and the sustainability of water use, including the science underpinning the identification and implementation of <i>environmental and other public benefit outcomes</i>: cl 96.• Open and timely consultation with all stakeholders, including Indigenous representation in relation to<ul style="list-style-type: none">– pathways for returning overdrawn surface and groundwater systems to environmentally sustainable extraction levels;– the periodic review of <i>water plans</i>;– other significant decisions that may affect the security of <i>water access entitlements</i> or the sustainability of water use: cl 95.• Consultation with affected water users, communities and associated industry on possible appropriate responses to address impacts from reductions in water: cl 97.• Monitoring performance of water plan objectives, outcomes and management arrangements: cl 40.• Provide regular public reports: cl 40. <p>Outputs (content of legislation or plans)</p> <ul style="list-style-type: none">• Statutory water plans: cl 36• Statutory provision for environmental and other public benefit outcomes: cl 35, 37• Water plans incorporating indigenous social, spiritual and customary objectives and strategies wherever they can be developed and taking account of possible native title rights to water in a catchment or aquifer: cl 52, 53• Accounting for water allocated to native title holders for traditional cultural purposes: cl 54• Monitoring and reporting requirements: Sched 6 cl1(x)• Review process that allows for changes in the light of improved knowledge: Sched 6 cl 4. <p>Outcomes</p> <ul style="list-style-type: none">• Improved certainty and confidence in reform processes: cl 93• Openness and transparency in decision-making: cl 25, 93• Provision for adaptive management of water: cl 25• Recognises Indigenous needs for water: cl 25• Identifies and protects high conservation values in water systems: cl 25• Provides for secure ecological outcomes: cl 37• A range of economic and social outcomes from improved security for entitlements: cl 25.

4.1.1 Collaboration, trade-offs and the NWI

In the context of law and regulation, collaboration is understood as a reliance on a broad array of third parties besides government working together to address public problems. Collaboration is now recognised as a central reality of public problem solving for the foreseeable future. It is useful for the reader to also refer to the discussion in Volume One, chapters 2.4 and 3.1.

This governance model involves (Salamon 2002, p 600):

- First, a clear recognition that the task of public problem solving has become a *team sport* that has spilled well beyond the borders of government agencies and now engages a far more extensive network of social actors – public as well as private, for-profit as well as nonprofit – whose participation must often be coaxed and coached, not commandeered and controlled.
- Second, the realization that the resulting complex systems of public action are not self-executing, that they pose immense management and organizational challenges, but challenges that differ from those characteristic of direct government, and that consequently they must be approached in a new way.

It involves a focus on themes such as:

- using tools or instruments to achieve public purposes;
- recognising the interdependencies of public agencies and stakeholders;
- replacing command and control regulation by negotiation and persuasion;
- shifting from management skills to those required to engage multiple stakeholders (Morgan and Yeung 2007).

The above themes find resonance in the language of the NWI especially in its provisions for water planning. Most advocates of collaborative governance recognise the importance of deliberative participatory procedures for securing regulatory objectives (Yeung 2004).

While deliberative participatory procedures are not expressly provided for under the NWI, one may point to paragraph 36, which recognises that planning decisions require trade-offs between competing outcomes 'informed by best available science, socio-economic analysis and community input'. Where trade-offs have to be made, it may be argued that the traditional information giving and consultation measures taken are not sufficient for meaningful community input into these decisions.

Another recent understanding of regulation which is reflected in the language of the NWI is that regulation can itself be a form of public communication; playing a role in enhancing transparency in government and opening the 'black box' of government actions and decisions. (Morgan and Yeung 2007). This is demonstrated, particularly by paragraphs 25 and 93 of the NWI. For example paragraph 25(3) requires adequate opportunity for environmental and public benefit considerations to be identified and considered in an open and transparent way. Paragraph 93 emphasizes the engagement of water users and other stakeholders for the purposes of certainty of confidence in reform processes and transparency in decision-making.

Relying on this understanding of collaborative water planning, and aspects relevant to collaboration as presented in Volume One of this report, the following chapters analyse law and policy, and draw comparisons between the jurisdictions.

4.2 Thematic comparison of water planning

Statutory water plans sit at the centre of the NWI and its broad framework of planning and regulation. The NWC confirms that 'how and when plans are developed and implemented is the critical driver for implementing the NWI water access entitlement and planning framework' (National Water Commission 2007b, p 33). Planning systems not only differ in detail in each jurisdiction, they differ in the emphasis that is placed on constituent parts of the system. The NWI envisages that regional differences in the variability of water supply and the state of knowledge be taken into consideration in planning. Gentle and Olszak consider that a planning system forms a 'complex network, with multiple linkages among plans and regulations of various forms and levels' (2007, p 59).

Strategic state/territory water plans are at the top of the hierarchy of plans. Implementation plans accredited by the NWI would also sit within this category. They are in general not statutory and may or may not have public input. We will only be making reference to these strategic plans where relevant.

The focus of this chapter will be on water plans that deliver the 'key actions' or the outputs required by NWI commitments. These plans, called by a variety of terms, provide for allocation and management of water within catchments or parts of catchments. To allow for some comparisons to be drawn across the jurisdictions, we adopt the following themes in our analysis of water planning:

Table 2: Themes adopted for comparative analysis

	Theme	Explanation
1	Planning objectives that provide for sustainability and adaptive management.	Consider policy/statutory planning framework and the extent that it provides for these two key NWI concepts. The core principles of sustainability have been internationally and nationally applied in natural resource management. Adaptive management of natural resources acknowledges the uncertainties and complexities of these resource systems. Essentially it is management that is flexible, encourages public input, and monitors the results of actions for the purpose of adjusting plans and trying new or revised approaches.
2	Legislative/policy standards and procedures for statutory water planning	This theme considers the extent to which <ul style="list-style-type: none"> • legislation and policy provide for standards that reflect NWI commitments to consultation and transparency in water planning, and • whether they are known and understood.
3	Legislative/policy standards allow for reasonable deadlines	Gentle and Olzak's view is that delays in water planning stem from unrealistic timetables set at high levels without planners' advice (2007, p 62). Time frames are also set by states working with the Commonwealth. Implementation against the States' own timelines is considered.
4	Whether socio-economic/ other analysis required	The NWI requires planning to take into consideration socio-economic analysis. Gentle and Olzak consider that this analysis if done at all, is at the last minute as a compliance activity (2007, p 61). This theme considers whether <ul style="list-style-type: none"> • the planning framework provides for timely data, reports and submissions; • there is an obligation on the decision-maker to consider data, socio-economic /scientific reports and submissions; and • it is clear how these matters are to be taken into consideration.
5	Community engagement in gathering and assessing scientific data	Best available scientific data forms a key requirement in making decisions. This theme considers the extent the planning framework provides for science-based planning by asking whether <ul style="list-style-type: none"> • there is independent scientific assessment of data; and • there is community input into the gathering and assessment of data.
6	Legislation/policy providing stakeholder engagement	The table in Chapter 3.1 will be used to assess the extent of engagement. It will consider whether participation focuses on information provision, or consultation, or uses deliberative techniques.
7	Legislation/policy providing for Indigenous engagement and reference to native title	This theme considers whether: NWI requirements of Indigenous representation in water planning are complied with; Indigenous social, spiritual and

		customary objectives are incorporated into planning and strategies for achieving these objectives; and whether planning takes into account possible existence of native title rights to water. It also considers whether Indigenous representation is culturally appropriate.
8	Transparency in decision-making	NWI requires that decisions in planning are open and transparent. This theme considers whether <ul style="list-style-type: none"> • there is a requirement that planning information is available to the public; and • it is clear how trade-offs between competing interests are made.
9	Relationship between planning and political process clear	The community has at times expected that they are the plan-makers. This theme considers whether <ul style="list-style-type: none"> • it is clear who is the decision maker of the final plan; and • the extent to which plans are binding on the State.
10	Guidelines for use of mediation/negotiation/other conflict resolution techniques	Water planning has been marked by conflict. The theme considers whether there is a consideration of how conflict will be resolved within and after the planning process.
11	Integration of plans	The NWI requires water planning to have reference to broader regional natural resource management planning processes. This theme considers whether <ul style="list-style-type: none"> • there is provision of multi-agency participation in process leading to integration of various types of plans related to water; and • water plans are required to relate to land use plans and NRM plans

Comparisons may be difficult to draw as states/territories are at different points of the process of NWI reform. The clearest example of this difference is WA, which became a signatory to the NWI agreement only in 2006 and adopted its NWI Implementation Plan in only 2007. Chapter 8 of this report will draw together findings from the comparative analysis and draw comparisons where relevant.

5. Analysis of framework for water planning in Queensland

5.1 Brief history of development and legislation

River flows in Queensland show distinct variations with time, with streamflows showing both a seasonal pattern and substantial annual variability in discharge. There is also a distinct variability of discharge and rainfall across the state. Streams in the west of the State and around the Gulf of Carpentaria frequently cease to flow for 6 months of the year. Streams on the eastern coast of Queensland generally have flow all year but show distinct seasonal variation.

Queensland's concerns with water upon settlement were based on pastoralism, small scale irrigation, water supply and sanitation for settlements, much like other parts of Australia. Queensland also had vast stores of an underground resource in the Great Artesian Basin, and it was tapped mostly through private investment. Private irrigation for sugar cane had taken place in the Bundaberg, Burdekin and Burnett districts (Powell 1991, p107).

When Queensland was brought into the Federation, it was drought-stricken – the Brisbane River stopped flowing in 1902 and the city supply was maintained by cutting trenches through the river's natural shingle bars to permit the residual water holes to supply Mt Crosby pumping station (Powell 1991, p93). The regulatory framework at that time centred on development of irrigation infrastructure by the State and licensing the taking of water. Irrigation in the state is largely state sponsored, with the first project, the Dawson Valley Irrigation Area, built in 1922 around Theodore (Dawson Valley Irrigation Area).

Under the *Rights in Water and Water Conservation and Utilisation Act 1910* (Qld) the state proceeded to build and operate around 37 irrigation areas and projects (Parker and Catton 2000). The Act also provided for small rural water and drainage boards to be established for water supply. Larger statutory authorities were later established to provide major water storages for urban supply.

The *Water Act 2000* (Qld) (Queensland Act) provided one of the earliest state responses to CoAG reform. It marked a foundational change as it was the State's first recognition that water needed to be sustainably managed. The Act established a legislative framework to provide for a catchment based statutory planning process based on CoAG's National Framework for the implementation of property rights in water (ARMCANZ 1995). Existing licences in water would be separated from land where hydrologic data is sufficient or where community support for trade coincides with drivers for trade, converted to new entitlements called 'water allocations' and tradeable.

All rights to the use, flow and control of all water in Queensland is vested in the State: (s 19). The definition of water covers all terrestrial phases of water – ie water in a watercourse, lake or spring, underground water, overland flow water, and water collection in a dam: Schedule 4. Former water legislation in Queensland did not vest overland flow in the State leading to problems with its regulation, particularly in the Lower Balonne. In that case, the State would also not have the power to allocate rights over that element of the resource (Tan 2000).

Under this new statutory framework, Queensland's first State Water Plan in 2005 placed the management of water within the context and objectives of the NWI (Queensland Government 2005). Strategy 1 of the State Water Plan relates to securing water for the environment and water users through water resource plans. Soon after, a State Strategic Plan 2006-2011 was developed replacing the State Water Plan. The 2006 Plan deals with strategy within a reorganised Department of Natural Resources and Water. The 5-year strategy continues to focus on NWI policy with the addition of wild rivers protection and climate change consideration in policy, planning and allocation decisions. In addition, regional water supply strategies are available for meeting water supply demands. These are not statutory plans.

Although surface water issues often command attention, in Queensland it appears that groundwater issues may be more urgent. 32% of all Queensland Groundwater Management Units' (GMUs) have reached their sustainable yield while a further 23% have high abstraction levels.¹⁸ Within the Great Artesian Basin (GAB), GMU's have been affected by declining pressure levels and/or flow rates in the artesian groundwater. Additionally the GAB groundwater resource is considered over or fully abstracted.

Queensland has a two tier process for water resource plans (WRP) and resource operations plans (ROP).¹⁹ The WRP is subordinate legislation which has a life of 10 years. It sets broad catchment wide standards which are then implemented through the ROP which has the life of its corresponding WRP. More recent versions of WRPs set out:

- definition of the plan area and nodes or locations on the watercourse where measurements are taken;
- outcomes for sustainable management of water;
- performance indicators and objectives;
- where there is unallocated water available, how much is available and where;
- general monitoring and reporting requirements.

In contrast the ROP deals with a great amount of detail including²⁰

- the process for obtaining unallocated water
- the granting of resource operations licences for water supply schemes
- rules for conversions of existing licences to tradeable water allocations
- if water is to be traded, the water trading rules
- the operating rules for these schemes
- the water sharing rules for each scheme and watercourse
- water sharing agreements between states, if applicable

¹⁸ The information on water statistics in this section is sourced from the Australian Water Resources Atlas website maintained by the government of Australia at <http://www.anra.gov.au/topics/water/overview/qld/index.html>

¹⁹ The other two plans which affect water management but which are not yet widely used are water use plans (WUP) and land and water management plans (LWMP). WUP are prepared only if the Minister is satisfied that water use in a particular area may cause negative effects on land and water resources (s 60). As yet there are no water use plans in preparation. LWMP are to ensure that irrigation water-use practices are ecologically sustainable, both on and off farm. Standard policies and procedures for their preparation are readily available. These plans need to be approved by the NRW and are mandatory in certain circumstances: Department of Natural Resources and Water, 2006, *Assessing a Land and Water Management Plan*, http://www.nrw.qld.gov.au/about/policy/documents/2550/Imu_2006_2550.pdf.

²⁰ For example the *Border Rivers Resource Operations Plan*, March 2008 was over 320 pages long.

- specific provisions for monitoring and reporting by resource operations licence holders relating to matters such as water quantity, and impact of storage operation on aquatic ecosystems.

The majority of these plans are catchment based however there is no legislative requirement for this. While the Queensland State Water Plan 2005-2010 states that 'catchment based water resource plans are a key means to deliver sustainable management' (Queensland 2005, 6) section 38 of the Act states that the Minister may prepare a plan 'for any part of Queensland'. There is generally one WRP for each catchment, however exceptions exist, for example the Gulf WRP where one plan covers a number of catchments.

Plans primarily relate to surface water within water courses and groundwater. Overland flows are regulated under certain conditions – if its use potentially impacts on the plan's outcomes, or other water users, or the ecosystem. Similar risk assessment takes place before planning extends to sub-artesian water.

In a minority of catchments WRPs were progressively developed. For example the Burnett and Pioneer catchment plans were initially developed for surface water in 2000 and 2001 respectively. Amendments are in the process of being carried out for groundwater (<http://www.nrw.qld.gov.au/wrp/timetable.html>) (14 Nov 2007).

There are no specific references in the Water Act for Indigenous rights and interests apart from the definition of sustainable management. For reference see the discussion in Theme 7.

5.2 Wild Rivers and Cape York legislation

Recent legislation has been enacted in Queensland relating to free flowing rivers mostly in the north of the state. The *Wild Rivers Act* 2005 (Qld) controls the management of natural resources, including the allocation of water, in northern catchments that retain intact natural values.

Nineteen wild rivers, mostly in Northern Queensland, were identified by the Queensland Premier, Peter Beattie in the lead up to the 2004 state election. Of these, four are in the Gulf of Carpentaria, thirteen on Cape York Peninsula and two on islands off the east coast of Queensland. Rivers declared under the Act are protected through the regulation of high impact activities, though existing activities are recognised and unaffected by declaration.

On 28 February 2007, six rivers were declared wild. In February 2007, a Wild Rivers Code was published. This document is to be used for assessing applications largely under the Integrated Development Assessment System under Queensland planning legislation.

The Act outlines a process to declare a river as wild. It includes public notice, a moratorium on new works, a declaration proposal that informs the public of key matters, including the natural values that are to be preserved and the types of activities to be prohibited or regulated. Public participation is legislatively required - the Minister is required to consider results of community consultation, and all properly made submissions: s 13. Participation by the public is not required beyond consultation.

The wild rivers framework uses the declaration process as a de facto planning process. The matters dealt with in a declaration are prohibitions on certain high-impact activities that occur within a management zone adjacent to the river and major tributaries, and the regulation of other activities in the balance of a declared basin.

Tradeable water allocations cannot be granted through a wild rivers declaration. Instead they are only to be granted after a water resource planning process under the *Water Act 2000*. However a declaration *may* include a **process** for granting, reserving or otherwise dealing with unallocated water in the proposed wild river area. In addition, the process will result in classifying the types of works²¹ for interfering with overland flows, and works for the taking of sub-artesian water or overland flows in a floodplain management area.

The relationship between the *Wild Rivers Act 2005* and *Water Act 2000* is clarified in s 37 of the 2005 Act. Where there is a WRP that applies to all or part of the proposed wild river area, then the matters mentioned in s 14(1)(k) to (p) and (3) in a wild rivers declaration prevail over the WRP. These matters include that of classifying works earlier referred to, and the process for granting, reserving or otherwise dealing with unallocated water, and any threshold limits for carrying out activities or taking natural resources in the wild river area. Otherwise, to the extent a wild river declaration is inconsistent in any other way, the water resource plan or resource operations plan prevails.

Over and above the matters listed in the *Water Act 2000*, the declaration of a wild river may add additional matters to be considered in the allocation of water. For example in the Settlement Wild River Declaration 2007, s 7 provides that when dealing with unallocated water in the declared wild river area, the Chief Executive must consider matters such as water quality, movement of fish and other aquatic animals, natural movement of sediment, and maintaining stream flows to preserve a number of habitats and refuge pools. In this matter, if there is any inconsistency between the wild rivers declaration and the WRP, then the declaration is to prevail. This is the model for declarations in the Gregory, Morning Inlet and Staaten Rivers.

The level of protection required of wild rivers was contested. Views were initially expressed that the wild rivers legislation prevents Aboriginal people from using the areas for mining, tourism or farming.²² Thirteen of the potential wild rivers identified by Premier Beattie in 2004 are found on the Cape York Peninsula. The 13 are the Jardine, Ducie, Wenlock, Watson, Archer, Holroyd and Coleman on the western peninsula and the Jacky Jacky, Olive, Pascoe, Lockhart, Stewart and Jeanie on the eastern peninsula. In January 2007 these were subject to a moratorium notice under the *Water Act 2000* (Qld) which prevents development and applies to the taking of, or interfering with, water in streams, sub-artesian aquifers and overland flow. This moratorium also covers vegetation clearing and mining applications.

To meet the criticism mounted against the protection of wild rivers, the *Cape York Peninsula Heritage Act 2007* (Cape York Act) accommodates sustainable development of wild rivers. It stems from a private agreement reached in 1996 by Indigenous communities, pastoralists and environmentalists to ensure coexistence

²¹ See Glossary for an explanation of the term 'works'.

²² 'Cape wild over rivers' *Koori Mail* 6 June 2007, 4 quotes Gerhardt Pearson, CEO of the Balkanu Cape York Development Corporation. His position was taken before the Cape York legislation in 2007, and Balkanu are now contracted by the Queensland Government to facilitate effective consultation on future wild rivers.

on Cape York and joint protection of the environment.²³ The historic agreement was designed to protect cultural heritage and environmental values while providing for greater certainty and more effective management of the pastoral industry. Negotiated outcomes provided the following:

- Aboriginal people gained an agreement for resolution of native title issues by negotiation rather than litigation.
- The cattle industry gained security in relation to native title.
- Conservation groups gained a commitment to World Heritage values and greater funding.

The Cape York Act provides for a framework for the cooperative and ecologically sustainable management of the region and the identification of the significant natural and cultural values of the Peninsula. Indigenous water reserves must be provided where a wild rivers declaration or a water resource plan is made in relation to an area in the Cape York Peninsula Region: s 27. The reserve is to provide for Indigenous communities in the area achieving their economic and social aspirations. These aspirations are balanced by the Minister in deciding the reserve, having also to consider the purposes of the *Wild Rivers Act 2005*.

Although the Cape York Act refers only to Indigenous reserves, in practice there are three reserves - Indigenous, general and strategic – available under Wild Rivers legislation. For example section 14 of the Archer River Wild Rivers declaration proposal, July 2008, provides for the volumetric limit of each reserve at the time of declaration: (a) Indigenous reserve—6000 ML; (b) strategic reserve—6000 ML (made available for projects of State or regional significance, town water supply, or ecotourism in the wild river area); and (c) general reserve—2000 ML.

Thus the Archer River Declaration Proposal on the west coast of Cape York Peninsula, identifies a total of 14,000 ML of unallocated water for basin development where current use is probably around 500 ML. The volume of water identified for future economic development in the Archer River Declaration Proposal is consistent with a level of water use in rural coastal catchments in central and southeast Queensland.

No mechanisms are provided in either the Cape York or Wild Rivers legislation on how the balance between preservation of natural values of the rivers and the achievement of the economic and social goals of Indigenous peoples is to be struck. This is likely to be through assessments of water volumes identified in declaration proposals and the consultation process, including that of government agencies.

Consultation is provided for in both the Cape York and Wild Rivers legislation. While processes are clear in the former, no particular format or mechanism for consultation is provided in the latter. The intent to consult is clear in Wild Rivers legislation: details of the community consultation that will take place must be given in the declaration proposal; the Minister must give consideration to the results of the consultation; and consultation report must be prepared within 30 days of the approval of the declaration: ss 12, 13, and 38. However the legislation leaves details of how the

²³ This landmark agreement was first signed by the Cattlemen's Union (CU), the Wilderness Society (TWS), the Australian Conservation Foundation (ACF), the Cape York Land Council (CYLC) and the Aboriginal and Torres Strait Islander Peninsula Regional Council on the 5 February 1996. The original agreement was revisited in September 2001 and the State of Queensland joined the agreement. See <http://www.atns.net.au/agreement.asp?EntityID=472> (29 February 2008)

consultation will take place open to administrative discretion. In comparison, the Cape York Act provides a structured and considered consultation process.

Two advisory committees are constituted to advise the Minister on various aspects of the Cape York Act. These are the regional committee, at least half of which must comprise the representatives of Indigenous people of the area; and the scientific and cultural committee. Detailed membership requirements are provided for both. It is noted that in relation to an Indigenous water reserve, there is no requirement for consultation of either the regional or the scientific and cultural committee. This appears to be an anomaly which should be reconsidered.

The thematic analysis below will focus on public participation measures under the Water Act 2000 (Qld) with reference to Wild Rivers legislation where relevant. It should be noted that more attention has been given to considering Indigenous interests and engagement efforts under the Cape York Act compared to the two other Acts. There is potential that engagement of Indigenous people under Wild Rivers legislation could also be developed along the lines of the Cape York Act. These matters are discussed under Theme 7 below.

5.3 Thematic analysis

Water resource plans are being developed for 30 out of 64 surface water catchment areas in Queensland. The provisions of each Water Resource Plan (WRP) are implemented through an accompanying Resource Operations Plan. Where there are no water allocations (or trade) and no dams in a catchment a WRP does not require implementation through a ROP, for example the Cooper Creek WRP. In Northern Queensland water planning has been completed for the Barron catchment, and WRPs but not ROPS for the Burdekin, the Gulf and the Mitchell Catchments.

Theme 1: Planning objectives that provide for sustainability, and adaptive management

Chapter 2 of the *Water Act* 2000 (Qld) provides for advancement of sustainable management of efficient water use. Sustainable management is defined to mean management that:

- Allows for the allocation and use of water for the physical, economic and social wellbeing of the people of Queensland and Australia within limits that can be sustained indefinitely.
- Protects the biological diversity and health of ecosystems.

Sustainable management is further described as contributing to a list of nine factors including:

- improving planning confidence of water users regarding availability and security of water entitlements;
- recognising the interests of Aboriginal people and Torres Strait Islanders, and their connection with the landscape, in water planning;
- increasing community understanding of the need to use water in a sustainable and cost-efficient way;
- encouraging the community to take an active part in planning the allocation and management of water;
- integrating, as far as practicable, the administration of the Act and other legislation dealing with natural resources.

Principles of ecologically sustainable development are also defined. They echo the general ESD principles and state that decisions and actions should provide for broad community involvement on issues affecting them.

The concept of adaptive management is not specifically mentioned in the Queensland Act. In Queensland there is no express reference to adaptive management of water. However an Adaptive Management Framework, which provides clear and progressive policy guidelines, has been formulated by the Department of Natural Resources and Mines (DNRM, 2005). It points to the importance of process and facilitation, information collation, systems analysis and visioning, monitoring and reviewing. Its core component acknowledges processes for facilitating decision-making, and community involvement. The document is not referred to in water planning, but has been used in the management of salinity. Despite the lack of an express reference to adaptive management, provisions for data collection and assessment are provided for in resource operations plans, see for example the Fitzroy Basin Resource Operations Plan, April 2006.

Theme 2: Legislative/policy standards and procedures for water planning

The Queensland Act provides for statutory planning processes. Responsibility for planning lies with the Minister and the Chief Executive (s 35). The Chief Executive also has a duty to provide information for planning purposes – this extends to making records of volume and quality of water publicly available.

Key steps in the process for water resource planning are given in Figure 2. These steps are outlined in the Water Act. Although statutory planning in Queensland has taken place over 10 years, there are as yet no publicly available policy guidelines in support of the statutory requirements.

Pre-planning phase: the first statutory step is an information report outlining the water allocation and sustainable management issues in the proposed plan area; proposed arrangements for establishing a community reference panel; and arrangements for technical assessment: s 39.

Preparation phase: public notice is then given of the Minister's intention to prepare a draft water resource plan: s 40. This is commonly referred to as a 'Notice of Intent'. Frequently a moratorium notice to maintain status quo while planning is underway is given at the same time: s 26. Public submissions may be made on planning matters including the constitution of the community reference panel.

Draft plan development phase: Procedural standards are provided for this phase by the requirement that the Minister is to take into consideration a list of matters when preparing the draft WRP. These include national, State and regional objectives and priorities for promoting sustainable development, the wild river declaration for the area (if applicable), future water requirements, cultural, economic and social values, advice from the community reference panel, technical assessment, and properly made submissions.

The Act requires a mandatory content for the draft plan, but not the final plan. An exhaustive list of substantive matters must be covered in the draft plan: s 46. The draft plan must –

- state water and natural ecosystem monitoring requirements
- state outcomes including ecological outcome
- state strategies proposed to achieve outcomes

- use best scientific information
- if tradeable water allocations are to be created under the plan, then environmental flow objectives and water allocation security objectives must be provided.

It appears strange that the Act requires mandatory content for the draft plan, but not the final plan.

Public Review phase: Each local government in the plan area is to be sent a copy of the draft plan. The draft plan must be publicly available for inspection and for purchase: s 49. An overview report which summarises assessments and findings about matters which the Minister is to consider in a WRP is made available at this time: s 48.

After considering all properly made submissions the Minister may decide that a further draft WRP is necessary: s 49A.

On approval of the final WRP, a report on the consultation process must be prepared within 30 business days. This report must include a summary of issue raised and how the issues have been dealt with: s 51.

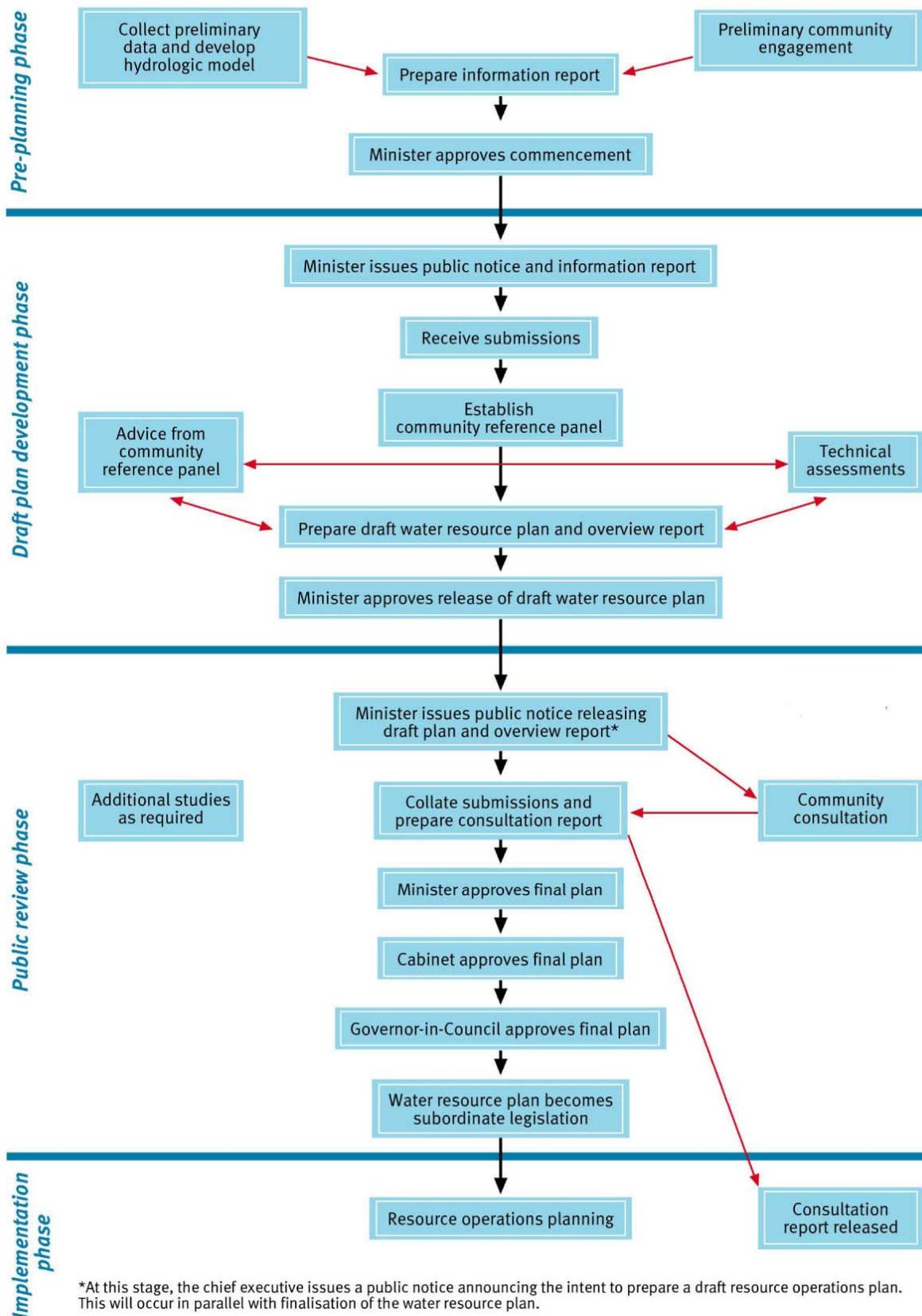
Implementation phase: A Resource Operations Plan may be prepared for part or all of the plan area: s 95. Generally a draft ROP is started at the time of finalisation of the WRP. More recently, a public notice announcing the Chief Executive's intention to commence a ROP is released at the same time as the draft WRP. Similar statutory requirements apply for a ROP. A Notice of Intent is published: s 96. Written submissions are allowed in a 30 business day time period.

Mandatory standards are set for ROPS: s 98. They relate to how the draft ROP addresses WRP outcomes, how water will be managed, what is the water infrastructure in the plan area and how it will be operated. Additional standards are imposed if (1) overland flow is regulated (2) if tradeable water allocations are available. In the case of overland flows, the draft ROP must set a minimum share of flow water that each owner of land may take: s 98(3). For water allocations, the draft must provide for rules and details of conversions of existing licences and authorities to water allocations, and a range of other regulatory measures including environmental management rules and water sharing rules: s 98(4).

Additional procedural requirements are imposed for ROPs –

- The NRW must explain either by letter or public meetings the implications of the notice to 'as many affected water entitlement holders as possible': s 96(4).
- Those who operate water infrastructure are to provide proposed arrangements for the management of water for example, water and natural ecosystem monitoring practices: s 97.

Figure 2: Water planning framework in Queensland



Issues arising from legislative standards

The legislative standards for water planning are well-known and understood. Although no formal empirical study into this has been carried out, there were a number of actions that contributed to an understanding of water issues. Firstly, a two way information process was established with the Water Reform Implementation Group, a state level consultation group with representatives of state agencies, industry, conservation groups and local government representatives. Secondly, fact sheets regarding water resource planning were available. However the Water Reform Implementation Group, now defunct, did not have any Indigenous representation, thus highlighting that there was little Indigenous input into water reform decisions.

A related issue is also whether the standards are satisfied in 'form' rather than in substance. There are two observations of how this may occur. Firstly, although outcomes are stated in the plan – they may be phrased in the most general terms. If this is so, then it will be difficult to ascertain whether those outcomes have been achieved. Secondly stated 'outcomes' are frequently not measurable. In the Condamine-Balonne Water Resource Plan 2004, one of the outcomes is stated to be 'to build social cohesiveness in the community by recognising the multiple users of water, including both Indigenous and non-Indigenous social and cultural needs. It is suggested that a statement such as this is not a measurable outcome.

Performance indicators found in WRPs may, to some extent, provide for measurable outcomes. These are found in 14 out of the 18 WRPs. These are present in WRPs where entitlements are converted to water allocations. Where allocations are not created, environmental outcomes are used, for example, in the Calliope WRP or Cooper WRP. There are two categories of performance indicators – one for environmental flow objectives (EFOs), and the other for water allocation security objectives (WASOs). There are two categories of performance indicators for EFOs –

- (a) The first category of EFO indicators are linked to flows or floods. These may be end of system flows, low flows, summer flows, beneficial flooding and 1 in 2 year flood flows. Flows are measured at 'nodes' or specified points along the river where gauging stations are located. End of system flows are very clearly specified: for example, at least 60.8% of the flow using a particular scenario simulated according to a specified model. However the objectives for other flows are not as tightly specified, difficult for the general public to understand, and measurement is complex. Arguably they are only set as a range of *desirable* flow patterns.²⁴
- (b) The second category of indicators relate to percentages of daily flow. These objectives have been criticised - as they are listed with little or no supporting information, they are not readily understood by anyone except trained professionals. Most members of the community will not be able to confirm whether an EFO means that flows will increase, remain unchanged or even decrease (Coffey 2001).

Other than these two performance indicators, other NWI outcomes, for example openness and transparency in decision-making and recognition of Indigenous needs to water, are not able to be measured.

²⁴ For example 66-133%, indicates that the EFO is to achieve approximately 33% variability of the pre-development flow. The EFO merely requires that flows outside of this range be minimised (see for example *Water Resource (Border Rivers) Plan 2003*, s 12).

Theme 3: Reasonable timelines

Queensland has been involved in a trial of water planning since the mid 1990s in the Fitzroy catchment. The NWI requires that plans for systems that are overallocated, fully allocated or nearing full allocation be completed by the end of 2007. All other systems are to have plans by the end of 2009 (Council of Australian Governments 2004: para 39-40). Queensland's Implementation Plan commits the state to completion of all WRPs by 2008, and all ROPs by 2009 (Queensland, 2006 p 154). At the time of commitment, all but 9% of WRPS had either been completed (58%) or planning had been announced (32%). In these circumstances it would seem that the target date of the end of 2009 for completion of all plans was realistic.

However NWC's recent assessment of progress notes that:

the rollout has not progressed as rapidly as initially envisaged due to a number of factors including greater needs for community consultation, the resource pressures of the south-east Queensland drought, and amendments required due to the boom in mining (NWC, 2007a: 28).

In the State's Implementation Plan for the NWI, loose target dates are given for the completion of plans and the timeline for each of the phases of the planning process are not explicit. The absence of a predictive timeframe may affect public expectations, as stakeholders have no way of knowing whether the process is going smoothly. Should stakeholders perceive that there is a delay in the completion of the plan, there may be uneasiness and conjecture as to reasons for the delay.

There are neither legislative nor policy timelines for completion of the plan once the planning process has started. From public information it appears that once a notice of intent is published, the draft WRP is released within a range of 4 months (Great Artesian Basin), 9 months (Gold Coast) and seven years (Mitchell), with most taking between 2-4 years. The next stage, from the release of the draft WRP to the final plan is again variable. In some instances it has taken 4 months (Calliope) with the longest being 18 months (Warrego/Paroo/Bulloo/Nebine). In most instances this stage took between 8-13 months.

The ROP process is speedier. From the release of the draft ROP to the final plan usually takes 10-12 months, with the shortest process taking 6 months (Great Artesian Basin) and longest in the Burnett, where the first 'instalment' of the ROP for a priority area was made in 2003, but final ROP 'instalment' for the remaining areas under the WRP is still yet to be finalised, thus taking over five years.

Deadlines exist in relation to consultation/submission periods. Generally a notice period of 30 business days is provided under the Water Act. This applies to:

- Written submissions in response to the notice to prepare draft WRP must be made within 30 business days of the publishing of the draft: s 40 (4).
- Submissions to the draft WRP must be made within 30 days: s 49.
- Where a further draft WRP is prepared a 30 business days period of notice is required: s 49A.

While the deadlines above appear reasonable, in some cases the public notice/submission period takes place in December, which makes it difficult for members of the public to give the matter the attention it deserves. In four out of 22 WRP processes, and three out of 11 ROP processes, the submission period took

place over the Christmas break. In those situations it is reasonable to expect that a longer period for submissions be allowed.

It is worth noting that the consultation and submission period for consideration of declaration proposals under the Wild Rivers Act is longer than under the Water Act. In the July 2008 declaration proposals for the Archer, Lockhart and Stewart Rivers, submissions were allowed until late November 2008, a period of around four months. This may be read as an attempt to allow for culturally appropriate time-frames for Indigenous communities in those catchments.

Theme 4: Socio-economic and other analysis

There is a statutory requirement that the Minister must take into consideration cultural, economic and social values in preparing the draft WRP: s 47(h).

However there is no specific legislative requirement for reports to be prepared. Therefore it is discretionary for socio-economic analysis to be prepared. In the Condamine-Balonne WRP, developed between 2003-04, no socio-economic study was carried out. For the Burnett WRP a social and economic information report was prepared which included a profile covering population, agriculture and industries and community sensitivity to change (Hamstead et al 2008).

Where socio-economic analysis is carried out, there is no policy on terms of reference, on what must be included (especially in terms of non-consumptive uses of water) and on whether uses outside the catchment / basin should be included. In practice, social values identified by the government are presented to the community reference panel for review at the completion of the draft socio-economic report which occurs during draft WRP development phase.

If these reports are considered 'technical assessments' then the Minister is to take the reports into consideration when preparing the draft WRP: s 47(j). It may be argued that technical assessments are limited to hydrological, ecological and other bio-physical assessments. Such an argument may be made from a reading of s 39 (c) which reads

... the Minister must prepare an information report about –

(a) ...

(b) ...

(c) proposed arrangements for technical assessment using best scientific information available and relevant to the preparation of a draft water resource plan for the proposed plan area.

Nothing prevents the Minister or the Department of Natural Resources and Water from utilising further tools in the planning process. Prior to the enactment of the *Water Act 2000* (Qld), a process for the development of a Water Allocation and Management Plan (WAMP) for Condamine-Balonne was undertaken in the late 1990s. A Community Reference Panel together with the Department developed a 'multi-objective decision support system' which included economic and social criteria. Late into the WAMP process the Minister curtailed the use of the decision support system with members of the CRP also expressing concern over process and content issues (Hamstead et al 2008).

The Condamine Balonne WAMP example highlights that there is no clear process as to how data and reports are to be taken into consideration by the decision-maker.

The point is that even where socio-economic analysis is carried out, it may not be effectively integrated into the planning process. For example, in the Burnett WRP, some stakeholders expressed misgivings that the studies 'did not assist in making trade-offs either because they were inappropriately designed for the task or were manipulated' (Hamstead et al 2008, p 280). Others thought that socio-economic reports in the Burnett were not fully disclosed because the data showed that a proposed dam was not justified economically (Hamstead et al 2008, 281).

Theme 5: Scientific data, communication of science

The Water Act imposes a duty that the best scientific information available is to form the basis of water planning: ss 46(1)(f), 47(c). In preparing a draft WRP, the Minister must consider the duration, frequency, size and timing of flows necessary to support natural ecosystems as assessed using this scientific information.

The information may either be provided by officers within the Department of Natural Resources and Water through consultants, or frequently through Technical Assessment Panels (TAP). TAPs are appointed during the pre-planning phase of the WRP. There is no legislative requirement for involvement by TAPs, no legislative or policy guidelines as to how members are appointed, their qualifications or experience, or the workings of the panel. Policy guidelines on these matters are also not available. Unlike the appointment of community reference panels, no public submissions are available on the formation of TAPs.

A coordinator, hired from the private sector, is usually in charge of appointing members of the TAP. A team of 7-10 scientists (with skills in hydrology, hydraulics, water quality, geomorphology, aquatic ecology, riparian ecology, estuarine/marine ecology) is assembled by the coordinator. They may be academics or from government. A desktop study is carried out, in conjunction with a quick field assessment sometimes without much base-line data or indepth study. The amount of base-line data varies between catchments. Occasionally public workshops attended by the team and NRW are held (Arthington 2006, Arthington and Pusey, 2003).

Scientific information is usually communicated to the community reference panels (CRP). Besides voluminous technical reports, in the first few planning processes, diagrams with a 'traffic light system' were provided. A risk assessment diagram rates the potential outcomes of particular options with red, green or amber colours. The current manner of communicating the impacts of various management scenarios is through a standard risk assessment - low, minor, medium, severe and very severe.

Where there has been direct access to TAPs by the public, this has received favourable feedback (Hamstead et al 2007). Approximately 250 members of the public attended two public forums in the Burnett which were held at the request of the TAP. These have been the only examples of direct communication between the public and TAPs.

Where the TAP reports are given, the Minister is obliged to consider them when preparing the draft WRP: s 47(j). These reports are publicly available.

Feedback from TAP members suggests that current process issues are:

- There is no process for collection of essential scientific data well ahead of the planning process, therefore data may be patchy and *ad hoc*;
- Recommendations of TAP reports and scientific advice is not incorporated into the environmental flow objectives of WRP;
- TAP members do not get feedback from NRW planning department;

- Monitoring suggested by TAP is not carried out (Arthington 2006, Arthington and Pusey, 2003).

Theme 6: Stakeholder engagement

Meeting the needs of the community through stakeholder engagement is prominent in water legislation. The definition of 'sustainable management' includes:

- Improving the planning confidence of water users now and in the future regarding the availability and security of water entitlements: s 10(2)(c)(i):
- Providing for the fair, orderly and efficient allocation of water to meet community needs s 10(2)(c)(vi):
- Increasing community understanding of the need to use and manage water in a sustainable and cost efficient way s 10(2)(c)(vii):
- Encouraging the community to take an active part in planning the allocation and management of water s 10(2)(c)(viii).

The role of the community is elsewhere highlighted as part of the principles of ESD – which decisions and actions should provide for broad community involvement on issues affecting them: s 11(f).

In the implementation of the legislation, stakeholder engagement in the Queensland process ranges from information provision/consultative in most catchments to mid-level deliberation in the highly conflicted Condamine-Balonne catchment (Hamstead 2008). In the analysis presented in Volume 1, chapter 3.1.4, the various modes of participation were categorised as ranging from information provision, consultation, deliberation, collaboration, and lastly decision-making.

Public notice is given at all key steps in the process and submissions are taken from all interested parties:

- at the 'notice of intent phase' regarding proposed draft plan and establishment of a community reference panel: s 40(2)(e);
- when the draft water plan is published: s 49(2)(b); and
- when the draft resource operations plan is published: s 100(2)(c).

In addition, it is mandatory to appoint a community reference panel (CRP) at the same time as the notice of intent is published: s41(1). In practice the NRW calls for nominations for the CRP, and a panel is selected to represent cultural, economic and environmental interests in the proposed plan area: s 41(2). The CRP is to advise the minister on the views and opinions of the community and it is made clear that the panel is not a decision-making body (Department of Natural Resources, 2006 #160).

A report on the community consultation process for a water planning exercise is a statutory requirement and must follow the release of a final WRP (see Theme 1).

Beyond the statutory requirements, there is a fair amount of flexibility and variation on stakeholder engagement. A high level of flexibility was demonstrated in the planning process in the Condamine-Balonne. The Minister has the discretion to appoint groups to advise on community matters: s 1005. During the WRP process, three separate advisory committees were appointed in that catchment for different sections of the river - the Upper Condamine Ministerial Advisory Committee, Middle Condamine Ministerial Advisory Committee and the Lower Balonne Community Reference Group. The three committees reflected the different and competing interests in the various parts of the catchments, and the history of conflict particularly

in the Lower Balonne (Tan 2000, Vanderbyl and Bouilly 2004). As a result of submissions from the NSW government, and feedback from the three groups, the draft WRP was amended.

To further illustrate the point about flexibility of process, the Minister appointed a committee to increase stakeholder engagement in the ROP process in the Condamine-Balonne not only in the plan area but downstream in NSW. The Lower Balonne Ministerial Water Resources Advisory Council was established, with a chair which reported directly to the Queensland Minister. In addition the two middle and upper catchment advisory groups continued to have informal input into the process. It should be noted that stakeholder engagement is not required under the statutory ROP processes. In practice the NRW has public information sessions at the start of the ROP process and while the draft ROP is out for public review.

This high level of engagement was considered necessary because of powerful stakeholders in the Lower Balonne. It was unique as interstate interests were represented in Murray River Water Advisory Council. There were deep divisions of interests in Murray River Water Advisory Council and the engagement process was far from smooth. Irrigators were mainly satisfied with the process, but not others. Downstream stakeholders, mostly graziers and those from NSW suggested that there was a lack of transparency and procedural fairness in the ROP development (Hamstead et al 2008).

In other catchments where the conflict has not been as entrenched, NRW expresses satisfaction regarding consultation. NRW officers often go beyond the statutory processes and may attend meetings with particular group/s of stakeholders (Hamstead et al 2008). However some stakeholders view the entire engagement process as 'tokenistic', for example in the Burnett (Hamstead et al 2008). Their views will be considered in Theme 8.

Mechanisms adopted to encourage engagement and provide for an element of transparency are:

- Making technical documents publicly available, for example TAP reports and socio-economic reports where available.
- An overview report on the proposed draft plan is a statutory requirement (s 48). This report is to summarise all relevant matters which the Minister is required to consider in making the draft WRP.

Stakeholders have suggested that it would be worthwhile to run workshops on the whole process early and include the technical detail and analysis systems used in the planning process so that stakeholders can understand the basis for decisions (Hamstead et al 2008).

Theme 7: Indigenous engagement and native title

Legal and policy issues relating to native title and cultural heritage matters were discussed earlier in this document.

The Minister and the NRW are under a duty of care not to harm Aboriginal cultural heritage: s 23 (1) *Aboriginal Cultural Heritage Act 2003* (Qld). Under that Act it is likely that the duty extends to having a due-diligence assessment for water planning. If that process results in deterioration of cultural heritage sites where water is featured, or impacts on water related landscape features then agreement with an Aboriginal Party is required. No policy document refers to this and it is unclear and unlikely that due-diligence assessment is at present part of the WRP process.

Water legislation appears to place a high priority on Indigenous interests. The definition of 'sustainable management' includes 'recognising the interests of Aboriginal people and Torres Strait Islanders and their connection with the landscape in water planning': s10(2)(c)(v). Despite this statutory recognition, no specific mechanisms are provided in the Act to identify these interests and ensure trade-offs are transparent. This leaves the Act open to criticism that the recognition of Indigenous connections through the water planning process is merely symbolic.

The NWI requires that water plans should address Indigenous water issues and further requires immediate implementation of this: Schedule A, NWI. Thus far, this provision of the NWI has received a rather limited interpretation. Thus far water planning at best gives attention to sacred sites and cultural heritage when Indigenous values are assessed, but no action is taken to incorporate Indigenous people's interests in, and potential contributions to, environmental research and economic activity (Jackson 2006). A purposive interpretation of the NWI and the definition of 'sustainable management' in Queensland legislation requires a deepening of measures for incorporating Indigenous water issues into planning, particularly in Northern rivers which have significant Indigenous communities. Gaps in the research into implementation of the NWI were identified in Volume 1 Chapter 3.3.5.

In Queensland Indigenous participation is largely carried out through the CRP process. Membership of the CRP is required to reflect cultural interests and in four out of the five catchments in northern Queensland CRPs had Indigenous members. For the Burdekin Basin Water Resource Plan, two 'Traditional Owner' representatives sat on the Community Reference Panel for the water planning process (Hamstead et al 2008).

The Queensland NWI Implementation Plan refers to separate consultation with 'special characteristics' tailored for Indigenous requirements, such as more than one traditional owner group in a WRP. Further non-statutory measures are taken to engage the Indigenous community:

- an Indigenous Working Group (IWG) may be appointed to improve engagement. In the Burnett views were canvassed from 30 Indigenous representatives. The IWG met 11 times (Hamstead et al 2008). An IWG was also set up in the Barron catchment (Department of Natural Resources and Mines 2003, p. 11-12). No assessment has been made of this alternative process;
- informal 'consultations' may be carried out (Department of Natural Resources and Water 2006, p. 27);
- information consultation through natural resource management bodies;
- Indigenous issues papers, for example one was developed for the Georgina Diamantina catchment (Queensland Government, 2006).

Ascertaining who to consult may be a problem in areas where there are no registered native title claimants. This is unlikely to be the case in Northern Queensland, but is an issue in other areas where native title has been extinguished over vast tracts of land and where groups claiming attachment to land may be less organised.

Queensland's NWI Implementation Plan also states that 'as native title rights to water have not been legally recognised, Queensland has not been able to make any specific legislative or WRP provisions. However water allocated to protect ecosystem processes acts to protect traditional uses associated with water' (Queensland

Government 2006, p27, 28). There are also no relevant performance indicators given for this key action of the NWI.

It is likely that the above statement in Queensland's NWI Implementation Plan does not go far enough to fulfil the intent of the NWI. Indigenous peoples hold title under the land rights model as well as under the *Native Title Act 2003* (Cth). Under the NWI there is a general obligation to consult Indigenous communities in their capacity as land holders and users of water (see key actions under Element (viii)), and a specific obligation to consult over Indigenous water issues. Under the NTA, rights to water include taking water for drinking and domestic use, and if proven, a right to fish. Further, even if native title claims have not been determined, or Indigenous rights over water not fully defined, the NWI requires that the *potential or possibility* of native title be considered in planning.

Positive outcomes have been reached in two very recent WRPs for the Gulf region and the Mitchell catchment. Indigenous water reserves have been established in these two plans, the first two in Queensland. The Mitchell WRP provides an Indigenous reserve of 5000 ML from unallocated water: s 28. Unallocated water held as an Indigenous reserve may be granted only for helping Indigenous communities in the Cape York Peninsula Region to achieve their economic and social aspirations: s 27. A similar provision appears in the Gulf WRP for the rivers in Cape York except that the annual volumetric limit for Indigenous water is much less, at 1000 ML: s 33.

These Indigenous water reserves have to date been located primarily in the Cape York Area. While these special measures are positive outcomes, their significance should not be overstated for the following reasons:

- The reserves are *only* available from rivers in Cape York and are a direct result of negotiations between interested parties which led to the landmark Cape York Agreement in 1996 and the *Cape York Peninsula Heritage Act* which followed in late 2007.
- The reserves in the Gulf and the Mitchell WRP are not a result of Indigenous engagement in the water planning process. The draft plans which were circulated for public consultation had no mention of Indigenous water reserves.
- It is uncertain whether Indigenous people in the Gulf and Mitchell Catchments were involved in negotiating the amounts allocated through the reserves, therefore it is not certain that the volumes allocated will meet their needs.
- None of the other rivers in the Gulf region which have significant Indigenous populations in their catchment areas have such provisions attached.
- The volumes of water available are small, at 1,000 ML for the Gulf in comparison to the general reserve which comprises 175,000 ML per annum. In the Mitchell the general reserve comprises 55,000 ML per annum.
- Indigenous reserves may be put towards the achievement of economic and social aspirations of Indigenous people, but as yet there is no process for working out how best to identify what these may be.
- Water allocated through these reserves will take the form of water licences and will thus not be tradeable.

Declarations under the *Wild Rivers Act 2005* may also provide for Indigenous water reserves.²⁵ It will be interesting to observe whether Indigenous reserves will be

²⁵ The *Cape York Peninsula Heritage Act 2007* requires that the Wild Rivers declaration does this. As a result a 6,000ML Indigenous reserve is proposed for the Archer River declaration, see s. 14 (http://www.nrw.qld.gov.au/wildrivers/pdf/archer_declaration_proposal.pdf)

provided in regions outside of the Cape York Area, where significant Indigenous populations also exist.

To sum up, there is no specific statutory or policy requirement for Indigenous engagement beyond the general duty that a CRP must provide for cultural, economic and environmental interests in the plan area. The practice is for two Indigenous representatives in the CRP. This is unlikely to provide satisfactory arrangements for cultural differences, particularly in larger regions where the diversity of Indigenous perspectives may be very high. The level of Indigenous engagement appears limited in many catchments, and special measures are ad-hoc. It is unclear why one measure is taken and not another. It is suggested that policy be developed for a comprehensive Indigenous engagement strategy which takes into consideration the cultural heritage duty of care, develops appropriate processes for identifying the economic and social aspirations of Indigenous communities, and seeks consistency in providing access to water for Indigenous groups across the State.

Theme 8: Transparency in decision-making

It is the Minister for Natural Resources and Water who is responsible for decision-making in water planning. The minister has an obligation to consider a long list of matters when preparing the draft WRP (s 47). This list is set out in full below:

- (a) the State's water rights and the volume and quality of water;
- (b) national, State and regional objectives and priorities for promoting sustainable development;
- (ba) to the extent the draft plan applies to a wild river area—the wild river declaration for the area;
- (c) the duration, frequency, size and timing of water flows necessary to support natural ecosystems as assessed using the best scientific information available;
- (d) the underground water levels and underground water recharge processes necessary to support natural ecosystems;
- (e) taking of water authorised under section 20;
- (f) existing water entitlements;
- (g) the State's future water requirements, including cultural, economic, environmental and social requirements;
- (h) *cultural, economic and social values*;
- (i) *advice from the community reference panel*;
- (j) *technical assessments for the draft plan*; (italics added);
- (k) the effects the draft plan will have on water not covered by the draft plan;
- (l) the effects the taking, or interfering with, water not covered by the draft plan will have on water covered by the draft plan;
- (m) environmental values established under the Environmental Protection (Water) Policy 1997;
- (n) the sustainable resource management strategies and policies for the catchment or underground water basin, including any relevant coastal zone;
- (o) *all properly made submissions about the proposed draft plan*; (italics added);
- (p) the public interest.

The minister has a duty to prepare reports on the consultation process including a summary of issues raised and how the issues have been dealt with: s 51.

Apart from the mandatory requirement to consider factors and the duty to report on consultation, there is no guidance either from the legislation or from policy as to how the Minister is to reach her/his decision. Thus the issue of transparency of decision making is very much related to how trade-offs are made in reaching a particular

decision. There are no mechanisms to guide a Minister as to how the trade-offs between competing interests are to be made.

Stakeholder comments on how decisions are made fall into five categories (Hamstead et al 2008).

- (1) Support that the final decision is made by government.
- (2) A lack of confidence in the objectivity of supporting information available to the public, including environmental modelling socio and economic studies.
- (3) The lack of confidence by the CRP, TAP and IWG that the recommendations they have made on trade-offs have been considered.
- (4) Perceived inadequate representation of environmental interests on the CRP in comparison with consumptive interests, therefore making articulation of those views difficult.
- (5) A scepticism that the final decision was in accordance with the objective of sustainable development.

Theme 9: Relationship between planning and political process clear

The legislation clearly states that it is the Minister who makes the final decision on submissions, and on a WRP: s 50. The Minister has full powers to decide:

- whether a further draft WRP is required: s 49A, or
- that the water planning process is not to proceed: s 52 or
- that a WRP is to be amended: s 55; or
- that a new WRP is to be prepared to replace an existing WRP: s 55.

Where the Minister exercises power under ss 52 or 55, she or he is required to give the reasons for the decision.

In relation to implementation of planning, it is the Chief Executive who has powers to consider submissions on the draft ROP and decide on the final ROP: s 103.

However the political processes between State agencies are unclear to the public, and may undermine the water planning process. This lack of clearly defined boundaries between planning and political processes was demonstrated in the Burnett. The WRP was concluded in 2000 and overridden through a later piece of legislation in 2001 to allow the building of Paradise Dam and associated weirs, and to change indicators in the WRP (Coffey 2001). Confusion arises as the Water Act 2000 sets out various processes to decide on river system yields, uses, shares etc. Once this process has been followed and government uses other legislation to override the result, it causes confusion and alienation of people involved in the planning process.

Legislatively it is clear that the State had the power to take this course of action. Section 4 (2) of the Water Act 2000 (Qld) states that the Act binds the State except for the powers of the Coordinator-General under the State Development and Public Works Organisation Act 1971. Therefore any major infrastructure development, including the construction of dams will override water plans. It would be advisable for government to notify the community, prior to development of a WRP, that major infrastructure projects are proposed. If so, the public would be aware of the proposed projects so that political channels could be used to address their concerns.

Theme 10: Guidelines for use of mediation and other conflict resolution techniques

There are no effective rights of appeal against the approval of plans or internal review of the WRP or ROP itself. In relation to decisions that are made regarding individual rights in the implementation of a plan, or a WRP or ROP, or wild rivers declaration, the complainant (called an 'interested person') 'may only appeal to the extent that a different decision, consistent with the plan or declaration could have been made': s 851(2).

Administrative decisions taken under the WRP or ROP or wild rivers declaration may be reviewed under the *Judicial Review Act* 1991 (Qld). Grounds for review, which relate to procedural matters, not substantive ones include:

- The decision-maker breached the rules of natural justice
- The decision-maker did not observe the correct legal procedures
- The decision-maker did not have the authority to make the decision: s 20.

To address these limited rights of review, a statutory mechanism has been developed for resolution of grievances arising from the ROP process. A referral panel has been established to advise the Chief Executive on certain matters: s 1004. At present the referral panel may address submissions relating to (a) a proposed water allocation (b) an environmental management rule (c) a water sharing rule and (d) an implementation schedule. Thus substantive matters are able to be addressed if they fall within these categories, for example a submission that an environmental management rule does not adequately address water requirements of a certain species of fish.

The referral panel plays an important albeit limited role in resolving disputes. It comprises at least 3 individuals drawn from a pool which has relevant expertise or a community background in water matters. It is provided with technical and administrative help. It is cost effective for water users with a grievance, and has the aim of providing an unbiased review of the implementation of planning. However the advice from the referral panel is not binding, nor is it available to the complainant. This mechanism supports administrative resolution of a small range of disputes and has been adapted from an anomalies committee used in NSW around 1977 when licensees had volumetric limits attached to their water licences.

There are no policy guidelines for mediation or other conflict resolution techniques in water planning. Conflict resolution provided by statute concentrates on internal review of a decision: s 861-865. In limited circumstances after the internal review, an individual may appeal to the courts: s 877. Arbitration is also available if a compliance notice has been served: s 891.

Theme 11: Integration of plans

Water planning is undertaken by the NRW although interagency groups with the Department of Primary Industries (DPI) and Environmental Protection Agency (EPA) may be established in particular plans.

Water planning is at present not integrated with other planning processes within the catchment. Water supply planning is subject to a different process and timeframes. For example the Wide-Bay and Burnett Regional Water Supply Strategy concentrates on urban and industrial use, and supply issues, for 20-50 years. The Burnett WRP is agriculture-based and has a planning cycle of 10 years.

An example of tensions which may arise from a lack of coordination between water allocation and management planning and water supply initiatives occurred in the Baffle Creek area. Water planning began in 2007 when planning also started for a dam for water supply to Gladstone under Strategic Water Initiatives (Regional Water Supply Strategies). A furore resulted amongst conservationists and the local community as the area is one of the most environmentally sensitive in central Queensland. Water Minister Craig Wallace would not rule out building a dam,²⁶ but bowing to community pressure, Premier Anna Bligh announced in March 2008 that no dam would be built.²⁷

Other natural resources planning processes may be undertaken at the same time as water planning, but there does not appear to be any coordination between the various processes. Take for example the South West NRM plan (SWNRM) which covers seven catchments - Condamine-Balonne, Border Rivers, Maranoa-Balonne, Nebine-Mungallala, Warrego, Paroo, and Bulloo.²⁸ The current NRM plan was developed in 2002 and 2003 at around the same time as the WRP for the Border Rivers and Warrego/Paroo/Bulloo/Nebine. Neither the WRP nor NRM planning documents show common processes or joint stakeholder consultation. From the perspective of the community, it was an added imposition that the Condamine-Balonne Water Quality Management Plan (CBWC, 2001) was completed at the start of the WRP process in that catchment. It is likely that the same stakeholders would have been involved in all three processes. A valuable opportunity to integrate planning for NRM, water quantity and quality issues was missed.

Recently, targets are being set for resolving the Natural Resource Management issues of the SWNRM plan area, including: water quality; developing and implementing riparian management plans which rehabilitate fish habitat; managing riverine structures; controlling alien fish species; protecting threatened native fish species; and managing fish translocation and stocking. These activities were being carried out at the same time as the ROP process for the Border Rivers and Warrego/Paroo/Bulloo/Nebine.

This example illustrates that efficiencies and synergies could have been gained from an integration of the several planning processes which were concurrently carried out.

²⁶ "QSIA airs Baffle Creek Dam fears", 29 February 2008,

<http://www.abc.net.au/news/stories/2008/02/29/2176017.htm>

²⁷ "No dam for Baffle Creek", *The Courier Mail*, 3 March 2008.

²⁸ For details see <http://www.southwestnrm.org.au/publications/regionalplan/index.html>.

6. Analysis of framework for water planning in Western Australia

This chapter outlines the current regime for managing and allocating water in Western Australia, the current planning framework and its identified weaknesses. As new legislation is expected the proposed new water planning framework is briefly referred to in the analysis of thematic issues.

6.1 Brief history of development and legislation

Western Australia occupies one third of the land mass of Australia and is inhabited by less than one tenth of the population. The water resource is characterised by its scale, diverse hydroclimate and landscape.²⁹ Its development situations range from substantial areas of wilderness, pastoralism, and large scale mining development, through to broad-acre farming and coastal pockets of intensive irrigation. Intense development occurs in the Perth Coastal Plain where some 85% of the population resides.

Most rivers in Western Australia are intermittent, with summer flow in the north, winter flow in the south and ephemeral river flows in the north-west. Perennial streams are a comparatively unfamiliar feature, except in the far south-west corner of the State. Substantial quantities of confined and unconfined groundwater of varying quality occur in the sedimentary provinces.

Water is the consistent factor in settlement and growth in all of the states. By the end of the 1830s in WA there was a strengthening preference for populating the higher rainfall region of the south-west by colonialists (Powell 1998). The spread of population in the hinterlands has been dependent largely on underground water or extensive piped reticulation systems from coastal sources. There is strong reliance on public water systems and on major dams for effective utilisation of surface water. In contrast to the eastern seaboard, urban and industrial use exceeds irrigation use across the state. Significant public irrigation systems have been developed in the south-west and Timor Sea divisions.

There are 44 river basins in the State. About a third of the State's surface and groundwater resource systems are at a high or fully committed level of use; some areas of groundwater are seriously over-allocated. Groundwater resources have 'hotspots' of concern. Two of the state's Groundwater Management Units (GMUs)³⁰ are considered overdeveloped, these being the Murray Cockleshell Gully unit of the Perth Sedimentary Basin and the Collie Sedimentary Basin. There are a significant number of highly developed Groundwater Management Units in the Perth region where utilisation is at or near sustainable limits, and quite possibly overallocated. These include the Gngangara and Jandakot mounds.³¹ The Carnarvon alluvial

²⁹ The information on water statistics in this section is sourced from the Australian Water Resources Atlas website maintained by the government of Australia at http://www.anra.gov.au/topics/water/pubs/state_overview/wa_ovpage.html (accessed 3 March 2008).

³⁰ A GMU is a groundwater system defined and recognised by the State agency.

³¹ See

<http://portal.water.wa.gov.au/portal/page/portal/WaterManagement/Groundwater/Gngangara>

aquifers of the Gascoyne River and the Albany GMU are also considered to be fully allocated.

Surface water is generally not stressed. Three basins are considered to have a high level of resource development, while 33 basins have a low level of development.

Virtually all of the dams above the Swan coastal plain result in the overallocation of the streams that flow below. There are very few passing flow events for any of these dams, and very little definition of environmental flows. Most are less than half full, which is why the ground water has been over-exploited and there is one desalination plant already in operation and another under construction in this region.

Significant growth in water use has occurred since a national water review in 1985. Groundwater use has trebled and surface water use has increased by 40%. Factors driving the increased use include mine dewatering,³² significant farm development in the Ord Irrigation Scheme and a widespread increase in self-supplied irrigation activity from surface and underground water sources in the south-west region. Water use in the State is projected to double again in the next 20 years. This continued rapid growth in demand has implications for managing water sustainably in WA,.

WA became a signatory to the NWI in April 2006, almost 2 years after other states. Water is scarce in many areas of the state however relatively few of WA's water systems are considered by the State Government to be overallocated or close to full allocation. Groundwater resources are the most important in WA, and they are localised and fragmented with water quality varying from fresh to hypersaline. Generally groundwater resources in WA have no predictable recharge and it becomes difficult to measure sustainable limits. As in other large states, surface water resources vary greatly. River flow in the north is influenced by cyclonic activity (Department of Water 2007).

The Water and Rivers Commission had responsibility for water policy, planning, and overall management of water until October 2005. The newly formed Department of Water has since taken on that responsibility. A newly created ministerial portfolio was also established at the same time.

The current framework for managing and allocating water in WA is found in the *Rights in Water and Irrigation Act 1914* (WA) referred to as the RIWI Act.³³ As a result of the CoAG water reform framework the RIWI Act has already undergone two substantial phases of reform (Gardner 1998 and 2002). It is currently under review and likely to be replaced at the end of 2009 by a new Water Resources Management Act.

Prior to recent legislative amendments, only water in proclaimed management areas was vested in the Crown and subject to regulatory control. Outside of these areas, water was subject to the common law. As of 2001 the right to use and flow, and control of water in watercourses, wetlands and groundwater is vested in the Crown, making the control over water resources more comprehensive than was previously possible (Gardner 2002). However, overland flows (unconfined surface waters) are

³² Mining use of ground water is extracted for processing and also pumped out for mine de-watering. Either way, the arid zone extraction of groundwater for mining is not being measured as sustainable in allocation terms. There is a lack of knowledge and scrutiny about the ecological consequences of the mining of groundwater.

³³ Other legislation which are relevant are the Waterways Conservation Act 1976 (WA), the Water Supply, Sewerage and Drainage Act 1914 (WA), the Metropolitan Water Supply, Sewerage and Drainage Act 1909 (WA), the Country Areas Water Supply Act 1914 (WA), the Environmental Protection Act 1986 (WA), the Water Boards Act 1904 (WA), the Water Agencies (Powers) Act 1984 (WA), and the Conservation and Land Management Act 1984 (WA).

still not vested in the Crown. There is thus no or limited capacity to regulate these flows, consequentially no capacity for the Crown to allocate overland flows. Gardner has identified this as an issue in some areas of WA, for example in the south-west for irrigation of vineyards, where taking of overland flows is a significant practice (2002, p9)

The taking and using of water is generally required to be authorised by a licence or other right provided for under the Act.³⁴ Taking of water from all artesian wells requires a licence. Most licences to take and use water are for a maximum period of 10 years, and some are issued for shorter periods. For example, in the Ord, licences expire five years after issue but are routinely renewed (Department of Water, 2006). In the past licences were granted on a 'first in first served' basis with little regard for environmental issues. The concept of sustainable management of water was introduced by amendments to the RIWI Act in 2001. However no clear statement of the application of the precautionary principle exists (Gardner 2002, p15, Roberts and Gardner 2005).

Generally there are no application fees or annual charges associated with the granting, holding or renewal of a licence. A recent attempt to introduce water resource management charges by regulation was defeated when the Legislative Council voted in April 2008 to disallow the regulation.³⁵ Licences are subject to conditions, which are to define the water entitlement as an annual volumetric allocation, address specific local issues, and require the licensee to use the entitlement within a reasonable time. In 2000, power was given to extend conditions to matters such as the protection and enhancement of the water resource and ecosystems, and the environment in which the water resource is situated; and the monitoring of the above. (s 15, Schedule 1, RIWI Act.)

Weaknesses in the existing framework and its implementation have been examined since at least 1997 (Bartlett, Gardner and Mascher 1997; Gardner 1997 and 2002, Freehills and Gardner 2005). The general issues regarding the regulatory regime are identified as:

- The legislation is complex and difficult to understand.
- The regulatory regime for both surface and non-artesian groundwater is limited to proclaimed management areas. As of 2006 there were 45 groundwater and 22 surface water management areas proclaimed (Marsden Jacob Associates 2006).
- Substantial water catchments have not been proclaimed, eg Margaret River Wine region. Development which has occurred in these unproclaimed areas are thus subject only to the common law regime governing riparian rights, groundwater and overland flow, with minimal general statutory limits in the RIWI Act ss.5B and 5E. The DoW has severely limited authority to manage, and may not allocate water in these areas.

³⁴ Other rights under the RIWI Act include basic rights which are riparian rights in and outside of proclaimed surface water management areas (ss 9 and 20); basic rights to take water from non-artesian wells in prescribed underground water management areas (s 25A); and other rights akin to statutory riparian rights enjoyed in common for persons who are able access the water resource by public road or reserve (ss 10 and 21).

³⁵ See Legislative Council, Hansard, WA Parliament, 8 April 2008, Rights In Water And Irrigation Amendment Regulations (No. 3) 2007 — Disallowance.

- Outside of proclaimed areas, the DoW has little information on water extraction and water use.

Amendments to the RIWI Act in 2001 were intended to establish tradeable water entitlements and enhance the protection of water for the environment. However significant constraints still exist which prevent full implementation of CoAG objectives. For example, the RIWI Act does not provide for clear specification of the water entitlement; separation of water entitlements from land; and security of tenure of entitlements. Ongoing reform has been identified in these and other areas.

A description of reform measures would be incomplete without reference to privatisation of irrigation cooperatives which has occurred over a period since the 1990s (Freehills and Gardner 2005). Four irrigation cooperatives currently exist in WA. For instance, in July 2002 the Water Corporation handed over responsibility of administering the Ord Irrigation Scheme services to the Ord Irrigation Co-operative (OIC). Volume 4.2, 'Water planning in the Ord River of Western Australia', of this report considers water planning in the Ord Region. All irrigation cooperatives hold a single allocation licence under section 5 C of the RIWI Act. Individual irrigators generally hold shares in the cooperative in proportion to their entitlements to water and in accordance with the cooperative's articles of association. The WA arrangements mirror those of NSW (Marsden Jacob Associates 2006).

6.2 Current and proposed water planning framework

The RIWI Act prior to 2001 did not provide for water planning although water agencies in WA 'have been developing procedures for water resource planning, including for environmental allocations, over the last two decades' (Gardner 2002, p16). In these circumstances there was no legal recognition of environmental water provisions. Statutory water planning is now recognised as the means by which the Department of Water provides 'secure water entitlement to users while meeting its social and environmental obligations.' (Irrigation Review Steering Committee 2005, p53).

WA currently has a 'nested' water planning system. Three levels of water management plans are provided in the Act – at regional, sub-regional or local levels. These classifications are rather misleading because the plans may relate to more than one region, sub-region or locality, and moreover all three levels of plans may be combined in the one document: s 26GV. The objectives of the plans are to guide management by detailing the management approaches relevant to the level of plan.

For *regional* management plans the purpose is to set out matters that guide the general management of water in the region in relation to:

- definition of water resources and environmental values and their protection;
- use of water;
- integration of water resources planning and management with land use planning and management: s 26GW.

For *sub-regional* management plans the purposes are made specific to the sub-region and include:

- how investigation and development of water resources are to be facilitated by Commission;
- how rights are to be allocated to meet various needs including those of the environment;
- applications, renewal, suspension and transfer of licences;
- Commission's assessment of sustainable use;
- strategies of implementation of the plan: s 26GX.

Local level plans duplicate somewhat the purposes of the sub-regional plans in that they determine particular matters that guide management including:

- how rights are to be allocated to meet various needs including those of the environment;
- applications, renewal, suspension and transfer of licences: s 26GY.

Public notification and the right to make submissions on plans also exist (ss 26 GZA and 26GZB). A seven year minimum monitoring and reporting period is specified for all levels of plans (ss 26GW (3), 26GX (3), 26GY (3)). This is to ensure that, as far as practicable, the objects of this part of the RIWI Act are achieved in the implementation of the plan.

In addition to the legislative regime in Western Australia, there are also various policy documents, the most relevant of which are:

- *Wetlands Conservation Policy* (1997 Department of Conservation and Land Management)
- Draft Statewide Waterways Management Policy 2000
- Statewide Policy No 5: Environmental Water Provisions Policy for Western Australia, 2000
- Statewide Policy No 6: Transferable (Tradeable) Water Entitlements for Western Australia, 2001

Several deficiencies have been identified in the framework introduced in 2001 (Gardner 2002, Freehills and Gardner 2005, Irrigation Review Steering Committee 2005, Marsden Jacob Associates 2006, Gardner 2006). The main flaws in the current statutory planning framework are:

- While environmental water provisions are required under statutory plans, there is little statutory provision for the 'clear identification and protection of environmental values' (Gardner 2002, p 18). Currently, procedures for environmental allocations are provided in a policy that has no statutory recognition.
- While plans are relevant considerations for licensing decisions (Sched 1, cl.7(2)), there is no guarantee in the RIWI Act that the plans are legally binding. It has therefore been suggested that these plans are not binding on the DoW who need only consider the plans in the exercise of powers.
- The DoW cannot declare a moratorium on the issue of new licences while the planning process is underway. This undermines the process.
- Other Acts may override the RIWI Act and allow access to water through the *Mining Act 1978*, *Land Administration Act 1997*, *Water Agencies (Powers) Act 1984* and the *Energy Operators (Powers) Act 1979*.

To elaborate on this last point, mining activities use 24% of WA's water. (This compares to 3% nationally.) Most of the water is non-potable or hypersaline from

groundwater resources in remote regions, and is not managed using allocation limits. The resources sector develops 95% of its own water supplies. Access to water for mining purposes is allowed under the *Mining Act 1978* subject to the RIWI Act. If mining takes place in an area outside of proclaimed water management areas under the RIWI Act, no licence under the latter is required.³⁶ The exploration licence or mining lease may provide that the water is licensed and subject to conditions that stipulate annual volume. If operations use a large volume of water, or are located in sensitive areas, then a detailed operations strategy is required which will include monitoring and reporting requirements (Marsden Jacob Associates 2006).

Water for hydro electricity production is covered in stand alone legislation which specifically overrides the RIWI Act. For example the *Ord River Hydro Energy Project Agreement Act 1994* (WA) (Ord Hydro Act) ratifies and authorises the implementation of an agreement (the main Ord River Agreement) between the state and the Pacific Hydro group of companies in relation to the development of a power station at Lake Argyle. The Ord Hydro Act authorises that the agreement operates and takes effect despite any other state law: s 4 (3). Water for the power station is not supplied through the RIWI Act. It is obtained through the *Water Authority Act 1984* (now the *Water Agencies (Powers) Act 1984*): cl 16 Ord Hydro Act.

Water for the hydro power station is at the core of the main Ord River Agreement but terms of supply are not disclosed in the Ord Hydro Act. Instead the terms remain confidential through a Water Supply Agreement which is ancillary to the main Ord River Agreement and referred to in the Ord Hydro Act.³⁷ Supply agreements of this nature predate statutory water planning, and their contractual obligations bind the state. It is acknowledged that capital investments of this nature require commercial confidentiality, but this alone does not preclude the necessity for the water planning process to be informed by key details such as (1) the quantity and flow of water provided under the agreements, (2) the life of the agreement, and (3) other obligations of the Water Corporation in relation to water supply.

In the 2005 Assessment of water reform progress, the National Competition Council recommended that competition payments to WA be suspended until it demonstrated significant progress in improving its water planning processes and practices. These improvements were in particular related to addressing overallocated systems. In May 2007, the National Water Commission recognised that WA made considerable progress in reforming the water planning framework. In particular the NWC noted that there would be new legislation by the end of 2008 providing clear guidance on water management and planning over various scales. The NWC thus recommended the lifting of the suspension of the National Competition Payment for Western Australia. (National Water Commission, 2007a).

Western Australia is in the process of overhauling its water management framework and the governing legislation. In *A blueprint for water reform in Western Australia*, the Water Reform Implementation Committee (2006) recognised that 'statutory water management plans are the basic building block of water reform and the primary

³⁶ See Mining Act s.85(1)(c) regarding the rights of the holder of a mining lease to take water.

³⁷ The Ord Hydro Act protects the supply of water to the power station in several ways: s 31. It provides: first that the exercise of administrative powers under the RIWI Act shall not affect supply without prior consultation between the Minister and the Pacific Hydro group; second, that any use of State powers should not have a material adverse effect on the operations of the power station. Third, s 31(d) of the Act provides that liquidated damages may be sought as a result of the failure to release water for the power station. Provisions for liquidated damages are often regarded by the public as cost penalty clauses.

means of delivering sustainable water resources management' (Water Reform Implementation Committee 2006, p4).

A high level of stakeholder engagement has so far taken place in the reform process. Much of this occurred via the Water Reform Implementation Committee, established in September 2005 to provide detailed advice on progressing water reform. The WRIC's response takes the form of the Blueprint document referred to above. After disbanding of the WRIC, the State Water Forum, a much larger, looser and merely consultative body of stakeholders' representatives (not industry experts), was established around 2006. This is a peak body of 50 stakeholders (Department of Water 2007). Workshops and information sessions were held for the public and stakeholder groups, with external facilitation for public workshops. Community and stakeholder views were surveyed with specific proposals presented for comments. A report on the public consultation, public submissions, and qualitative and quantitative analysis of the surveys was given by a professional consulting group (Department of Water 2007).

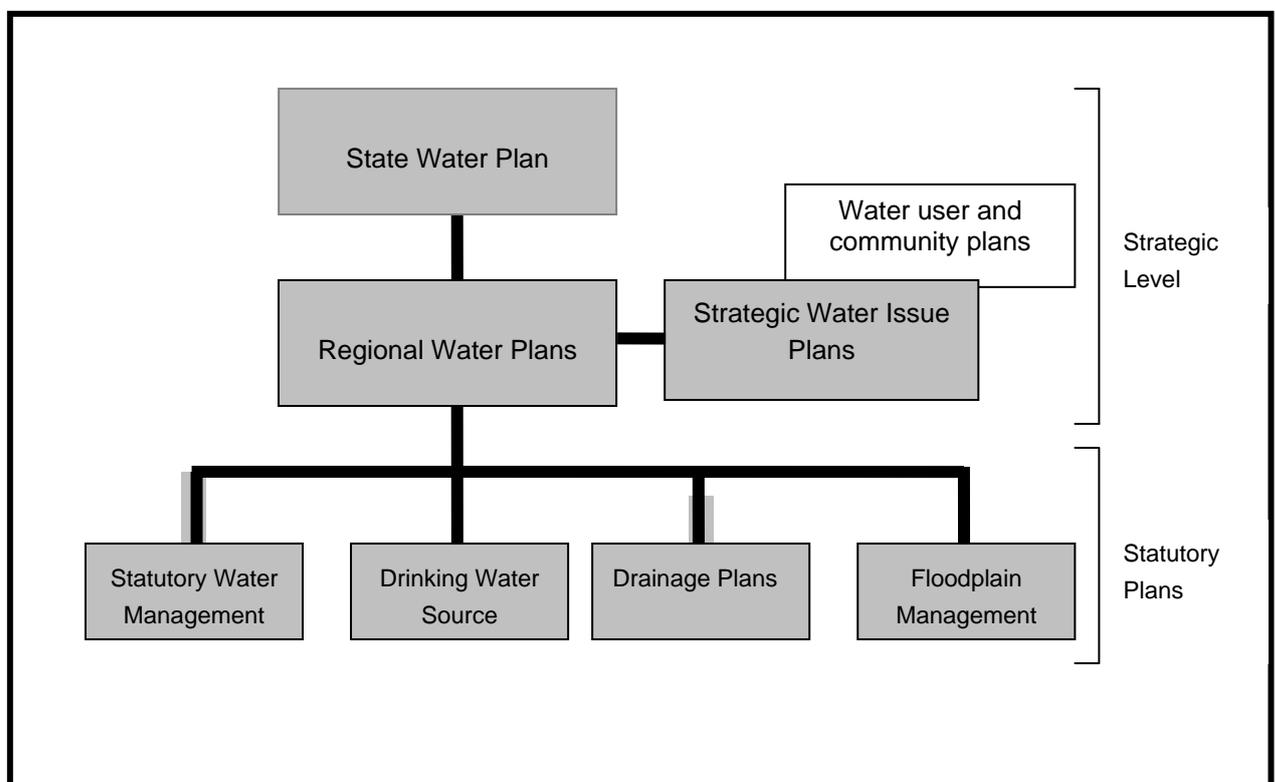


Figure 3: WA proposed planning framework, adapted from State Water Plan 2007

The current hierarchy of water planning has two non-binding strategic planning instruments at the top and it is likely that the proposed arrangements will reflect this as well. The first, the State Water Plan, a non-statutory document released in May 2007, evaluates likely demands and management options for each sector of water use. It outlines the government's approach to management, and sets out broad principles to be incorporated into Regional Water Plans. The proposed planning framework is outlined in Figure 3 above.

The second tier of the Regional Water Plans will not resolve water allocation issues nor determine the available water for consumptive use. Instead the Regional Water Plans have a 25 year planning horizon to ensure a clear path for water supply security, implementation of water efficiency measures, and protection of the

environment. These plans, although non-binding, are to be given statutory recognition. It is said that these will have the legal effect of being relevant considerations for administrators under proposed new legislation. How this is to be provided for remains to be seen.

In the proposed planning framework, all four of the plans on the third and lowest level, including those relating to drainage, flood management and drinking water protection are to be statutory. The *Blueprint* recommended that statutory water management plans (SWMP) be the principal instrument for delivering security of water entitlements, public benefits outcomes including water for the environment, and providing sustainable management of water. Thus SWMPs really refer to water allocation and use plans. In time all groundwater and surface water management areas will be covered by SWMPs. Guided by Schedule E of the National Water Initiative, plans are to be made on the basis of best available science and information, reviewed within 10 years of completion, must provide for adaptive management, and set clear principles for allocation and sharing the available pool between competing interests (Water Reform Implementation Committee 2006). However, as noted by the NWC, boundaries for SWMPs are not linked to Regional Water Plan boundaries (National Water Commission 2007a).

The NWC accepted that WA's restructuring of planning arrangements was a major step forward. The prioritisation of areas requiring planning, and a timetable for this to occur was also noted. It observed however, that WA had a poor track record on implementation of planning within a tight timeframe, and that 'only one Statutory Water Management Plan had been finalised since the 2005 National Competition Policy Assessment'.³⁸ Funding for water planning projects is to be made available for four key areas in WA, with appropriate incentive/penalty measures for meeting targets.³⁹ Each water plan is to take up to 3-4 years to complete.

Transitional arrangements for plans to be put in place by new legislation, will provide that existing water management plans continue to operate and be treated as interim plans. They will then be updated or deemed to become statutory plans after that time (National Water Commission 2007a).

Strong views were expressed by the public in relation to public participation in planning. In response, the *Blueprint* recommended that it was imperative that SWMPs be developed for discrete water systems 'in close consultations with local users of (and stakeholders in) water' (Water Reform Implementation Committee 2006, p4). Thus recommendation 12 reads:

That consistent with the requirements of the National Water Initiative and community expectation, when preparing statutory water management plans, the Department of Water use transparent and consultative processes (WRIC 2006, p4).

In relation to the process for consultation, recommendation 63 of the *Blueprint* required the Department of Water to *identify and enable opportunities to strengthen*

³⁸ NWC, 2005 National Competition Policy: follow up of water reform progress: Water Planning in WA, September 2007 (<http://www.nwc.gov.au/resources/documents/2005-NCP-followup-water-planning-WA-0907.pdf>) at 4.2. This Statutory Water Management Plan was not identified by the NWC, and there is some doubt whether such a completed statutory plan exists. In Attachment A the NWC notes that there are four completed groundwater plans: Arrowsmith 2002, Carnarvon 2004, Gingin 2002 and Jurien 2002; and one completed surface water plan: Ord 2006.

³⁹ They are the Gngangara Mound groundwater area, Upper Collie surface and groundwater area, South West groundwater area, and Pilbara groundwater area (NWC 2007a).

community engagement in the management of water resources (emphasis added). Measures taken should include establishing community reference panels to participate in the planning process, and plans to define how communities may manage their own water. This recommendation was supported by the WA government, as were the vast majority of the other recommendations.

It appears that the *Blueprint* and the WA Government's response on public participation do not merely reproduce the measures that are already in place in the WA. There is an additional onus on the State to improve on existing measures, to seek out opportunities to engage the community, and to build community capacity to participate in the planning and ongoing management of water. This is a strong recognition of the role of communities in such planning and management.

It should be noted, however, that the NWC's Follow-up Assessment of WA in 2007 is silent on the participation measures required in planning.

6.3 Thematic analysis of planning

There has been a considerable amount of debate over the proposed planning arrangements and legislation, and several documents have been published foreshadowing the changes which are to occur. However, provisions are in a state of flux until new legislation is passed, (expected in 2009). Therefore, thematic analysis is necessarily based on the current framework. It makes some references to proposed changes and will be brief.

Theme 1: Planning objectives that provide for sustainability and adaptive management

The purpose of the RIWI Act is for the management of water resources, in particular their sustainable use and the protection of ecosystems and the environment: s 4. Adaptive management is partly provided for by the object of fostering consultation with members of local communities: s 4 (c). An assessment of the RIWI's objectives reads:

Whilst the protection of water dependent ecosystems is one of the objectives of the *Rights in Water and Irrigation Act 1914* (WA) that administrators are "to seek to ensure are achieved", it is juxtaposed with the competing goals of sustainable use and development to meet the needs of current and future users of water. The objects create only justiciable obligations of process; that is, an obligation on the part of administrators to consider the objects in their decision-making and not any substantive duty of environmental conservation. (Gardner 2006, p221)

There is a great deal of flexibility in relation to plans – though they must be reviewed every 7 years they can be revoked or amended at any time. The Commission has broad powers to amend, suspend or cancel licences in order to manage risk or adapt to change.

Currently, Statewide Policy No. 5, 2000 develops Environmental Water Policy. Ecological Water Requirements (EWRs) are to be determined on the basis of best available scientific information. Adaptive management is identified as a fundamental aspect of water resources planning. Processes are to allow for regular review of allocations and Environmental Water Provisions (EWPs). This document is perhaps the most forward looking of the policy documents in the current regime, and will be

referred to throughout the analysis in this section. The difference between EWPs and EWRs is clarified thus:

Determining ecological water requirements for an ecosystem involves identifying those aspects of the natural water regime that are most important for maintaining key ecosystem features and processes. EWRs include elements of quantity and duration and apply both spatially and temporally and are used to inform water resource management and decision makers in the determination of environmental water provisions (EWP). The EWP is the water regime that should be met after consideration of social, economic and ecological water requirements and may involve trade-offs between these requirements. Clearly, it is desirable that the EWR and EWP are the same, however, they may not be equal due to conflicts over the use of water. In such cases the issue of whether the EWP should be equal to or less than the EWR will largely depend on the relative importance placed upon the protection of ecological values by the community concerned. (Froend et al 2004).

Theme 2: Legislative/policy standards and procedures for statutory water planning

There is currently no obligation on the government to carry out water planning (Gardner 2006).

Should the government, at its discretion, decide to conduct a planning process, a regional management plan must include the definition of water resource values including environmental values and their protection. Sub-regional and local management plans must also include the DoW's assessment of the capacity of water sources to provide water at sustainable levels of use and the environmental impact of developing those sources, and the strategies for reaching those objectives.

The only statement about the effect of the statutory plan is in Schedule 1, cl.7(2), to the effect that it is a relevant consideration for licensing decisions. Thus, in the absence of any other statutory statement about the effect of plans, they are not legally binding.(Gardner 2006).

Under the State Water Plan 2007, the water policy framework and water planning framework will provide legislative and policy standards and procedures (Department of Water 2007). Stages in the current water management plan development framework are provided in Figure 4 below.

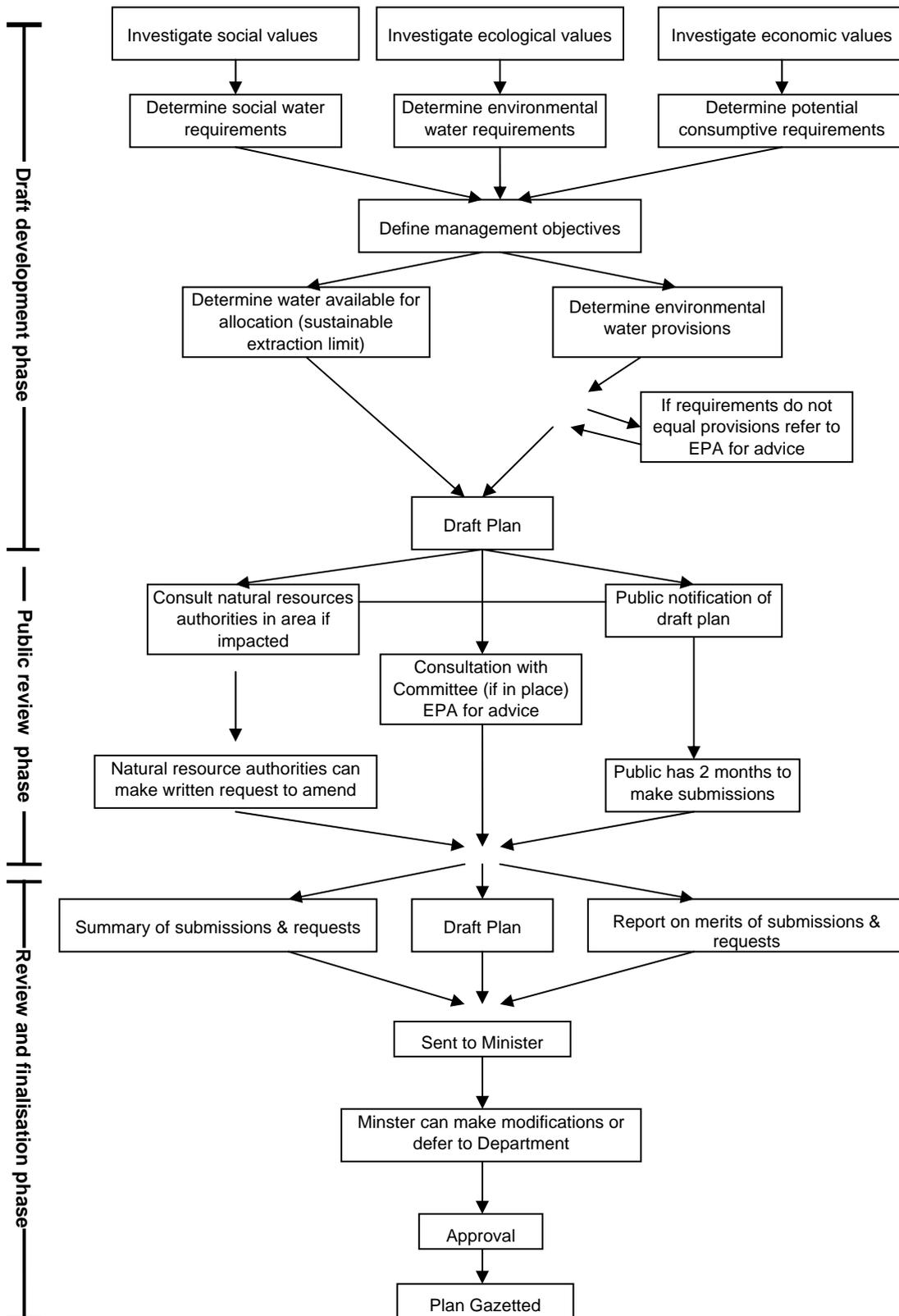


Figure 4: WA Water Management Plan Development Framework

Theme 3: Legislative/policy allows for reasonable deadlines

This is not currently addressed by legislation except for providing:

- public notification/submission periods
- that monitoring and reporting of all management plans are to take place at least once every 7 years: s 26GW(3), 26GX(3) and 26GY(3).

WA has set a timetable for completing plans on a priority basis. For systems that are overallocated or in a similar category, planning was to start by 2007. For systems not yet near full allocation, planning starts in 2009 (Government of WA 2007b).

In its 2007 assessment of WA, the NWC notes that five plans have been produced and implemented since 1999. Six more plans are near completion and will be produced by the first quarter in 2007-08. And six more will be at draft stage by the same date. When new legislation is introduced all these plans will be subject to transition or review arrangements in order to be NWI-compliant statutory management plans (National Water Commission 2007b).

Theme 4: Whether socio-economic or other analysis is required

This is again not addressed by legislation. However Statewide Policy No. 5, 2000, which develops Environmental Water Policy, requires that EWPs identify economic values and social values.

The setting of EWPs also requires the identification of key social values as part of the determination of social water requirements. As for ecological values, this may require consideration of the indigenous social values of relatively undisturbed water systems and contemporary values of systems which have suffered disturbance due to regulation, and/or land use changes. In some cases, the disturbance may be directly due to the establishment of towns and cities and the associated development of water-based recreation sites.

Identifying key social values will require consideration of:

- . Aboriginal and other Australian heritage;
- . recreational and tourist pursuits;
- . landscape and aesthetic aspects; and
- . educational and scientific aspects.

Clearly, the identification of social values requires consultation with the community, and especially key stakeholders (Water and Rivers Commission 2000, Appendix 3).

The Policy does not go on however to set out exactly how social values are to be considered. It refers to existing statutory requirements for community involvement under environmental legislation. No other mechanisms or measures are outlined in the Policy.

Theme 5: Community engagement in gathering and assessing scientific data; communication of science in water planning

Statewide Policy No. 5, 2000 states that Ecological Water Requirements are to be determined on the basis of best available scientific information. The policy emphasises that community consultation is to be carried out to develop allocation scenarios and Environmental Water Provisions.

Since the amendments in 2001, the Act provides for the establishment of committees for any locality or area to provide assistance or advice to the Department (see

below). It is a requirement that the committee should have experience in conservation of ecosystems: S26GL(2)(d). However, none have been established under these provisions. Similar committees were established under the *Water and Rivers Commission Act 1995*, because they could be established by the Board of the Commission – an easier process with no statutory guidance as to its effect and operation. With the repeal of the *Water and Rivers Commission Act 1995*, these committees have been given similar status under the *Water (Agencies) Powers Act 1984*.⁴⁰ Under the 1984 Act these committees exist under administrative authority.

Theme 6: Legislation/policy providing stakeholder engagement

The abovementioned Statewide Policy No 5, 2000 also recognises the need for stakeholder engagement.

Community involvement is an essential component of planning and management of water resources. With respect to the provision of water for the environment, this policy identifies a number of opportunities for the community (including all relevant stakeholders) to be involved in decision-making processes (Water and Rivers Commission 2000. p8)

Amendments to the RIWI Act in 2001 provided for the form and process of public participation in the management of water. Part III deals with Control of Water Resources. Section 4 states that

The objectives of this Part provide for sustainable management, the orderly, equitable and efficient use of water resources, and 'to foster consultation with members of local communities in the local administration', and to enable them to assist in that administration.

Stakeholder engagement mechanisms concentrate on information provision and consultation. Important points are

- (1) Public notification that a draft plan has been prepared is mandatory. A 2-month period for submissions is allowed: s 26GZA and 26GZB.
- (2) Local water resources management committees (Local WRMC) are the main avenue for the public to have input into planning. Plans at all levels must be prepared, amended or revoked only after consultation with the relevant WRMC: s 26GZ.
- (3) They may be established by the Minister for any locality or area of the State. However it is not mandatory for Local WRMCs to be established. If there is no committee in place in the region or sub-region to which a plan relates, there is no statutory requirement to form one: s26GZ
- (4) The membership, constitution, procedures and term of appointment of the local committees are to be determined as the Minister thinks fit: s 26GL. As far as is practicable:
 - members are to be drawn substantially from persons who are either residents, or employees or business operators;
 - should be included from local government, public authorities, Aboriginal communities, or the Water and Rivers Commission; and

⁴⁰ Section 217, *Water Resources Legislation Amendment Act 2007* (WA).

- users of water must be in the majority if the functions of the committee relate to use of water.

The comments in Theme 5 apply – no statutory committees have been appointed for the purpose of stakeholder engagement in water planning. Administrative or informal stakeholder engagement has taken place. For example a Community Reference Panel was convened ‘to identify the social values of the lower Ord River’ in 2000 (Department of Water 2006, p44). The Panel met on two occasions in the development of the Ord River Water Management Plan. This is discussed in detail in the case-study on the Ord Water Planning Process which accompanies this report.

Proposals to improve community engagement in the new regime have been outlined in 4.2 above, strongly calling for meaningful community engagement in water planning.

Theme 7: Legislation/policy providing for a level of Indigenous engagement and reference to native title

High level policy exists in relation to Indigenous engagement. A ‘Statement of Commitment for New and Just Relationships’ with Indigenous People dates from 2001, and was renewed in September 2005 with the Commonwealth government and other parties. It creates a set of principles and a process for the parties to build a Statewide framework of partnerships that can negotiate agreements at the local and regional level. Having this partnership framework as its objective the commitment takes a new approach to Aboriginal Affairs Policy and administration, with a focus on regional agreements as a solution. The aim is to enhance negotiated outcomes that protect and respect the inherent rights of Aboriginal people and to significantly improve Indigenous health, education, living standards and wealth of Aboriginal people. (Strelein 2004). Its implementation has the potential to greatly enhance the engagement of Indigenous people in the water allocation planning process, and improve on the opportunities now provided.

Under the current legislative framework based on the RIWI Act there is no express recognition of cultural heritage matters or native title issues. Except for representation on the Local WRMC, no additional measures are provided for Indigenous engagement.

The WA government in accepting recommendations of the *Blueprint for water reform in Western Australia* regarding community engagement added that plans should take into account:

Indigenous water entitlements (established through Native Title determinations) including cultural and economic values associated with water, that are documented in the planning process’ (Government of WA 2007a p6)

This suggests that entitlements to water for Indigenous people will be dependent on the resolution of native title. As Jackson and Morrison (2007 p 29) note, the NWI requires water planning processes to ‘take account of the possible existence of native title rights to water’ (Para 53) and that ‘water allocated to native title holders for traditional cultural purposes (under the NTA) will be accounted for’ (para 54). The NWI does not, however, give any guidance or details on how this might be done.

The recent WA Implementation Plan notes that ‘Indigenous engagement is especially sought in the processes of developing water plans’ in the State (Government of Western Australia, 2007b p 33) and that ‘Indigenous ecological knowledge is also

sought to assist in making appropriate water allocations for the environment' (Ibid). In the north of that State as well as for the Gngangara Groundwater mound near Perth, the DoW has commissioned expert studies of Indigenous values and associations with water (Yu 2000; Barber and Rumley 2002, McDonald, Coldrick and Villers 2005).

The DoW has an Indigenous Advisory Committee which considers issues of policy and Indigenous access to water as they are put to it by the Department (Government of Western Australia, 2007b). The WA Implementation Plan delegates responsibility to the WA DoW '...for taking Indigenous cultural values into account in water resources management decision-making' (Government of Western Australia 2007b, p33). It gives no details on what this means or how such accounting will be implemented.

The Draft La Grange Groundwater Allocation Plan, released for comment in September 2008, provides a best practice example of how Indigenous knowledge may be incorporated into plan making even in the absence of a statutory requirement to do so. At least eight Aboriginal communities are located in the plan area, and two native title determinations exist, as well as a current native title claim. Thus a large part of the plan area is either already held under native title, or potentially subject to native title. As part of a water planning process triggered in 1999 by a large-scale cotton development proposed by Western Agricultural Industries, the Department (then the Water and Rivers Commission) consulted with local Aboriginal groups. Consultation and a commissioned report into Indigenous cultural values identified a strong connectivity between land and groundwater resources and as many as 131 sites of cultural value (Yu 2000, DoW 2008). The Draft Plan provides that an appropriate management action is to identify the hydrogeological investigations required to determine how much water is needed to maintain sites of cultural value. This information will be used to guide any new applications for water.

Themes 8 and 9: Transparency in decision-making. Clarity in the relationship between planning and the political process

The finalisation of a statutory water plan is both a political and an administrative process. The Minister for Water directs the DoW to prepare plans: s 26GU. It is the Minister who has the authority to approve of plans: s 26GZE (3). The Minister may also delegate to the Commission the power to approve plans: s 26GZE(4).

The DoW may exercise its administrative powers to modify a proposed plan to give effect to public submissions and requests by other government bodies: s 26GZD. This may be read as just the normal process of the government in preparing a plan for the Minister to approve, however the express power to modify a proposed plan taken together with the Minister's power to delegate approval of plans, means that the DoW currently has greater powers under the RIWI Act than water agencies in other jurisdictions.

The final decision on the plan is made only where there is a summary of all public submissions made: S26 GZE(2)(a). A report on the merits of those submissions is to be furnished to the Minister.

Theme 10: Guidelines for use of mediation/negotiation/other conflict resolution techniques

Statewide Policy No 12 deals with the management of complaints and disputes on watercourses in WA. The policy sets out situations when the DoW will be involved, however none of these relate to water planning. If it is determined that the DoW has power to act on the complaint then investigation and mediation are the steps to be taken before any breach of the Act is dealt with.

Theme 11: Integration of plans

Currently a regional management plan must provide for the integration of water resources planning and management with land use planning and management: s 26GW(2).

In principle, water plans are made in an integrated manner with input from all other relevant state bodies. The Department must refer a draft plan to other bodies which have responsibility for the management of a natural resource if the plan may affect the functions of that body. The body can provide a written request that the Department amend the draft plan: 2 26GZC.

The final decision on the plan is made only where there is a summary of all requests made by other bodies: s 26GZE(2) (a).

7. Analysis of framework for water planning in Northern Territory

7.1 Brief history of development and legislation

In its infancy the Northern Territory was a nameless part of New South Wales when it was annexed by South Australia in 1863. Settlement of the Territory began at Port Darwin, and extended inland with the discovery of gold, then with the pastoral industry. South Australians promoted all manner of schemes to stimulate economic enterprise in the belief that plantation agriculture would thrive there, but these efforts came to nought (Donovan 1984). The other goal was to set up a pastoral industry, and this slowly took hold. In Central Australia, it was an extension of the South Australian pastoral frontier, and in the Top End it was founded principally by Queenslanders.

Shortly after Federation the SA Government surrendered control over the NT to the Commonwealth through the *Northern Territory Surrender Act 1908* (SA). While the government of NT resembles that of state governments in many respects, the political situation of Territorians differs from other Australians in important ways. Chapter 3.1 of this report briefly explains the Commonwealth's administrative and legislative powers over the NT. Thus the NT's power over water may be overridden at any time by the Commonwealth Government. Currently this does not appear likely.

On taking over the NT the Commonwealth also focused on close settlement in the Top End based on the agricultural industry. In doing so it disregarded the SA experience, and 'spent vast amounts of money and effort on fanciful schemes which had little chance of success' (Donovan 1984, p49). Pastoralism remained the mainstay of the economy but the economic depression of the 1920s meant that smaller pastoralists were forced out. Crops such as cotton and peanuts were grown near Katherine and the Daly River but were not commercial successes.

Economic activity since the 1930s to the 1970s was reliant on mining (Donovan 1984). A series of NT regional development strategies in the 1990s continued this trend

...they are concerned pre-eminently with an economic agenda that appeals to the 'settler north' (that is to short term residents of the north who earn large incomes from extractive industries) rather than to the long-term residents of these regions – indigenous or non-indigenous (Pritchard and Gibson 1996, p5)

The NT has an extreme range of climatic zones, limited data across most areas and a resource knowledge base limited to areas of current demand. There are 39 river basins within the Territory. Approximately 90% of the average annual discharge occurs between December and March in the humid zone. Compared with rivers elsewhere in Australia, the surface waters of the Territory are largely unmodified or regulated by dams, weirs, off-takes or diversions.

Data on water use is lacking in the NT. Based on available figures, only 0.46% of the sustainable yield of surface water is used annually in the NT.⁴¹ Surface water use in

⁴¹ Data on water was obtained from http://www.anra.gov.au/topics/water/pubs/state_overview/nt_ovpage.html

NT is dominated by urban water supply, which uses approximately 74% of total extracted water on average each year. Rural water supply accounts for 5%, Irrigation use accounts for 12% of total use and the cattle industry consumes approximately 6%. The remainder is consumed primarily for mining activities, and aquaculture. Most of the land under irrigation using surface water is located in Katherine River floodplain area within Daly River. Surface waters flow on an intermittent basis and therefore cannot be relied upon to provide a secure year round water supply with a few exceptions for example in the Daly which has perennial flows.

As a result of the high variability and seasonality in-flows in the Territory's surface waters, year round water use is reliant on the Territory's extensive groundwater systems. There are sixteen main groundwater resource provinces, seven in the Top End and nine in the Centre. Many of these groundwater basins have large storage capacities and remain viable in the long term due to the fact that they are largely recharged by rainfall. Supplies for Aboriginal communities in remote areas are generally from bores and occasionally surface water.

Across the NT the dominant user of groundwater is by the pastoral industry. Irrigated agriculture and horticulture, which is predominantly in the Darwin and Katherine regions, uses approximately 47,000 ML/year. Groundwater is also used by mines across the NT, with the major user the Nabalco bauxite mine. Two Groundwater Management Units are over-abstracted – the Mereenie Sandstone aquifer which is the town water supply for Alice Springs and the Alice Springs town basin aquifer which is being deliberately over- abstracted to manage a rising water table.

Groundwater resources face a number of threats due to the lack of knowledge about their sustainable yield and the extent to which other ecosystems are dependent upon them, requiring guaranteed environmental flows. Another significant feature of the Northern Territory's water resources is the extensive number of wetlands of international and national significance.

As far back as the late 1980s, early 1990s, it was acknowledged that 'access costs are high and the real costs of water should not be underestimated' (Northern Territory Government 1988?, p 22).

7.2 Water planning framework

The NT Water Act, enacted in 1992 but amended several times, provides for the management and administration of water. The Minister for Natural Resources, Environment and Heritage and the Controller of Water Resources exercise power under the Act. The Department of Natural Resources, Environment and the Arts (NRETA) is responsible for operational duties under the Act.

The Act is different from all other water legislation in Australia in three main respects.

1. The Act declares 'property in and the rights to the use, flow and control of all water in the Territory is vested in the Territory and those rights are exercisable by the Minister': s 9(2).
2. There is no statement of objectives in the Act. Although there is no standard model for objectives to be stated in legislation, increasingly, a statement is directed to all persons and institutions responsible for the legislation (see Queensland and NSW analysis).

3. Water quality and pollution controls are also found in the Act. All other jurisdictions have separate regulatory frameworks against pollution.

The regulatory regime in NT segments water into surface water and groundwater, and has separate controls placed. Controls placed on groundwater are by far the more exacting. Given the NT's reliance on groundwater, this is to be expected. The definition of groundwater does not make a distinction between artesian and sub-artesian water. The provisions of Part 6 of the Act apply unless an exemption is declared for a particular class or description of bores or drainage water or waste: s 47. In other words, the default position is that the controls described below apply for all groundwater. Important points to note regarding regulation of groundwater are:

- Construction of bores is regulated. Drillers for bores are licensed, and no one is to drill, construct, deepen, enlarge or otherwise work on parts of a bore unless she or he has a licence: s 48.
- Taking of groundwater requires a licence.
- A licence may be granted by the Controller to dispose of water underground by way of a bore: s 63.
- Otherwise disposal of water underground through a bore is prohibited and depending on the intention of the offender, is a serious environmental offence ranging from level 1-4: s 62.
- A licence may be granted by the Controller to recharge water in an aquifer: s 67.
- No work may be constructed or operated for unlicensed recharge: s 66.

In relation to surface water, the controls are simpler:

- No one is to take and use water (presumably from a waterway) unless permitted by a licence: s 44(1).
- No one is to construct or alter a dam, storage or other structure in a waterway so as to affect the flow or likely flow of water: s 40.
- An owner or occupier of land may drain the land in accordance with the *Soil Conservation and Land Utilization Act*: s 40(2)(a).
- An owner or occupier of land may construct a water storage away from a waterway if the flow or likely flow of water into or in a waterway is not materially affected: s 40(2)(b).

Deficiencies of the legislation have been identified (NSW Environmental Defender's Offices 2005) and amendments in 2000 provided explicitly for the declaration of Water Allocation Plans (WAPs) and for trading in water entitlements once plans were in place. Following this, the National Competition Council found that the NT legislation was consistent with the 1994 CoAG water reform framework. The NT Government in the Implementation Plan for the NWI committed to a comprehensive review of legislation by the end of 2006. This has not yet occurred, but the NWC's 2007 assessment of implementation does not comment on this issue.

Minor amendments to the Water Act were made in December 2007. A new Part 6A requires compulsory advertising of all licence applications and consequential decisions. Section 95 now provides for the Controller to keep a publicly available register of water extraction licences as required by the NWI.

7.3 Thematic analysis

Theme 1: Planning objectives that provide for (1) sustainability and (2) adaptive management

The *Water Act 1992* (NT) has no objectives or principles to guide the development or content of a water allocation plan.

Sustainability is introduced through the concept of 'beneficial use' which is defined in s 4(3) to include: agriculture; aquaculture; public water supply; environment (providing for health of aquatic ecosystems); meeting aesthetic, recreational and cultural needs; industry; and rural stock and domestic requirements. The Act further allows for the beneficial uses of a water control district to be specifically declared by Gazette: s 22A. For example in the Upper Alice Springs Water Control District, for the Surface Water Catchment Area, beneficial uses are listed as 'environment, cultural and rural stock and domestic'.⁴²

This concept is important as it provides the context for decision making related to management planning and the issuing of licences and approvals. Note however that there is no prioritisation in the list of beneficial uses, and the environment is just one of a number of uses for which water can be allocated (NSW EDO, 2005).

The Act provides for sustainable management of water by specifying the outputs and outcomes of the plan. Section 22B(5) specifies that a water allocation plan is to ensure in the water control district that:

- (a) water is allocated within the estimated sustainable yield to beneficial uses;
- (b) the total water use for all beneficial uses (including those provided through rural stock and domestic use and licences granted under sections 45 and 60) is less than the sum of the allocations to each beneficial use; ...
- (d) as far as possible - the full cost for water resources management is to be recovered through administrative charges to licensees and operational contributions from licensees.

The environment is further protected through a specific requirement that an allocation under s 22B (5)(a) is to include an allocation to the environment: s.22B(6).

The absence of planning objectives is not mitigated by policy documents. An undated document entitled 'Water Allocation Planning' which is purportedly circulated by NRETA states that for the Top End (the northern one-third of the NT) in the absence of scientific research directly related to environmental water requirements, the following contingent allocations are made for environmental water provisions and consumptive use: at least 80% of flow at any time in any part of a river or 80% of the annual recharge of an aquifer is allocated to the environment. In the event that current and/or projected consumptive use exceeds the 20% threshold levels, then new Surface Water Licences will not be granted unless supported by directly related scientific research into environmental water requirements.

⁴² <http://www.nt.gov.au/nreta/water/beneficial/pdf/bud.pdf>

For the arid zone (or southern two thirds of the NT), a more stringent default rule applies: 95% of the river is allocated to the environment, and total extraction over a period of not less than 100 years will not exceed 80% of aquifer storage at start of extraction. This default rule was applied in the Alice Springs Water Regional Strategy (NRETA, 2007a p3). The default rules suggest an intent to protect the environment, but the firm rules are at best difficult to implement with poor hydrological data. At worst the default rules have no legislative or even administrative authority unless adopted in a WAP.

There is similarly no reference to adaptive management of water in either legislation or policy. In areas where capacity may be low, this lack of a definition leaves it open for communities to misinterpret the concept. There is an attempt by the Daly River Ministerial Advisory Committee to furnish an explanation of the concept, but the effect of such explanations in the absence of a statutory imperative remains to be seen.⁴³

Some provisions in the legislation do however allow for flexibility, monitoring and review of management:

- Plans have a limited life of not more than 10 years
- Plans are subject to regular review
- There is a continuous program for the assessment of water - the Controller is under a duty to collect and analyse data including for flow, volume, characteristics, quality and flood potential: s 34.

As noted earlier in Chapter 6.1 of this report, cogent arguments exist as to the clear provision of statement of objectives.

Theme 2: Legislative/policy standards and procedures for statutory water planning

There are few legislative or policy standards and procedures for water planning, therefore planning is at the discretion of the Minister. The steps taken in the practice of water planning are set out below.

⁴³ See "Adaptive Management and the Daly River" on <http://www.nt.gov.au/nreta/water/drmac/pdf/adaptivemanagement.pdf>

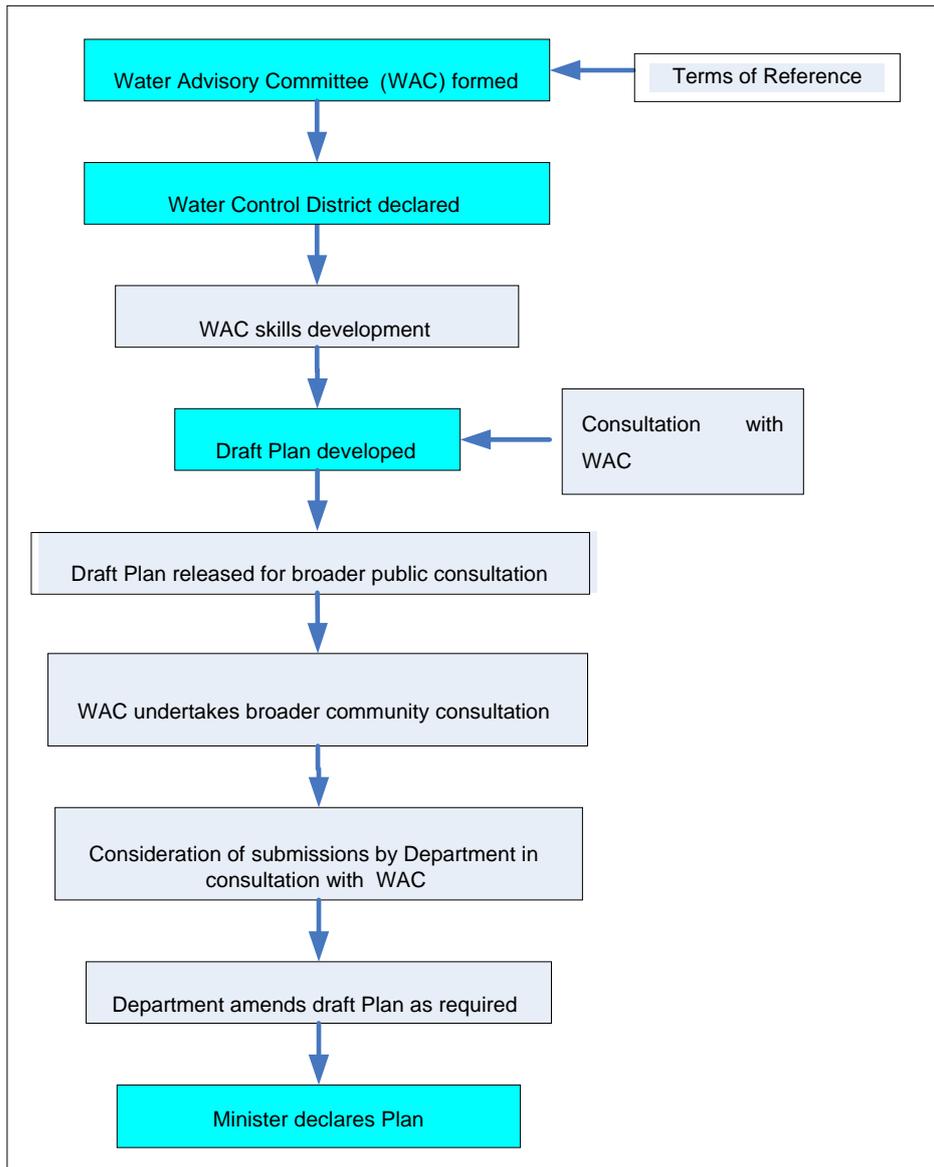


Figure 5: Northern Territory water allocation planning

(Darker boxes indicate statutory steps)

In relation to water planning, the Minister may declare, by notice in the Gazette, a part of the Territory to be a *water control district*, and assign a name to that district (s 22). The purpose of the declaration is specified in the notice, and may include the purpose of preparation of a WAP. To date there are six declared water control districts.

The Minister has wide discretion in relation to the making, format and content of Water Allocation Plans (WAP). No detailed water planning policy exists although fact sheets are available on the NRETA website. A few key elements of the WAP framework appear in the Act. A WAP must:

- be in a water control district
- exist not longer than a 10 year period
- be reviewed every 5 years or less
- allocate water within sustainable yield to beneficial uses
- allocate water for the environment
- allow for trade of licences (s 22).

Besides WAPs, NRETA has developed Water Resource Strategies (WRS). The difference in title suggests that there are differences between a WAP and a WRS, but the Alice Spring WRS states that it is a WAP under the Water Act. Thus far the Ti-Tree Region and the Alice Springs Water Resource Strategies (September 2007) have been declared. Several concerns have been raised regarding the Ti-Tree Region Water Resources Strategy completed in 2002. Among the most important are that:

- It is general and lacks rigorous scientific underpinning (for example, it is unclear the extent to which modelling has been reliably used to identify sustainable yields).
- It assumes that regional groundwaters have no cultural significance and that there are no ecosystems reliant on shallow groundwater aquifers.
- The Plan does not provide an express environmental allocation for the aquifers within the region.
- There are no clear “rules” for allocation of water to various identified beneficial uses.
- The strategy provides no public information on the hydrology modelling, consultants to the process, stakeholder comments or the committee’s response to any comments received (NSW EDO 2005).

As of June 2008, the Ti-Tree WRS was in the process of being reviewed. The draft WAP for the Katherine was released in June 2008 and the public comment period has closed. A WRS for the Darwin rural area is being developed.

Theme 3: Legislative/policy allow for reasonable deadlines

In their Implementation Plan for the NWI, the NT Government states that the Territory river systems or groundwater resources are not overallocated (Government of NT 2006). Thus there is not as much pressure as the States to finalise water plans. However there is evidence to suggest that the Tindall Limestone Aquifer in the Katherine water control district is already overallocated with ‘Katherine River late dry season flows being reduced by unacceptable levels’ (NRETA 2007b).

The NT Implementation Plan made a commitment to review the Ti-Tree Water Allocation Plan by July 2007 to incorporate NWI requirements for transparency of process, reporting arrangements and risk assignment.

In addition the government committed to start planning in July 2006 and complete WAPs in mid 2007 for Darwin Rural and Katherine/Daly Regions. This timeline is tight and at the time of writing of this report only the WAP for the Katherine is being completed.

The NWC did not comment adversely on the NT Government’s actions except for the Ti-Tree WAP (National Water Commission 2007b). This will be discussed under Theme 7.

Theme 4: Whether socio-economic/ other analysis required

Apart from the general requirement for investigation and analysis of the resource itself, there is no statutory requirement for other analysis. There is also no evidence that socio-economic analysis is required by policy, nor does any step in the planning process explicitly provide for an obligation for the decision-maker to consider data, socio-economic or other reports. In the formulation of a WAP for the Tindall Limestone Aquifer within the Katherine Water Control District, a values and issues report has been tabled for consideration by the Katherine Water Advisory Committee but it is unclear how these matters will be taken into consideration (NT Government

et al, 2007). One of the key processes required by the NWI is that trade-offs between competing outcomes for water systems require judgements based on by best available science, socio-economic analysis and community input. The forthcoming review of NT legislation requires particular attention to these matters.

Theme 5: Community engagement in gathering and assessing scientific data; communication of science in water planning

It is implied that the estimate of sustainable yield in a WAP is based on scientific data. There are no references to 'best available science' as the basis for planning, and no specific provisions for technical assessment in WAP processes. Neither provision for independent scientific assessment of data, nor any requirement of community input into the gathering and assessment of data is made. It is evident that NT legislation has yet to be made NWI compliant in these matters.

Theme 6: Legislation/policy providing a level of stakeholder engagement

The Act also allows for, but does not mandate, the establishment of a Water Advisory Committee (WAC) in a water control district for which a management plan is being prepared: s 23(1A). There is no requirement that the WAC members be representative of interests within the water control district. Appointment and the number of members are all at the discretion of the Minister: s 22B(2). This is in contrast to the statutory requirements of the Water Resources Review Panel.

Seven water advisory committees have been appointed at various times:

Rapid Creek Catchment Water Advisory Committee
Katherine Water Advisory Committee⁴⁴ (KWAC)
Darwin Harbour Advisory Committee
Daly River Management Advisory Committee (DRMAC)
Ti-Tree Water Advisory Committee
The NT Artesian Water Advisory Committee
Alice Springs Water Advisory Committee.

Each advisory committee is to consider and advise the Controller on such matters within its jurisdiction as are referred to it by the Controller: s 24(3). In addition it is to advise on the effectiveness of the water plan in maximising economic and social benefits within ecological constraints: s 24(1B)(a). Terms of reference are furnished to each advisory committee. For example the terms of reference for the Katherine WAC (KWAC) which was established in January 2007 state:

To participate in decision making about water resource management by identifying, discussing and making recommendations to the DRMAC on matters regarding water resource management in the Katherine Water Control District.

To advise DRMAC on policy matters and regional development issues that may impact on the sustainable management and development of groundwater use in the Katherine Water Control District.

To assist in the development and review of the Katherine/Tindall Water Allocation Plan and community consultation arrangements.

⁴⁴ The Katherine Water Advisory Committee functions as a sub-committee of the Daly River Management Advisory Committee.

To assist with the determination of beneficial uses and water allocations under the Water Act. KWAC consists of twelve voting members, an independent chairperson and is supported by three NT Government Officers.⁴⁵

We see that each term of reference is specific to the task. In the Daly River Management Advisory Committee, the functions of the Committee are much broader. They are to assess and advise the government on matters including: land and resource use options; critical scrutiny of estimates of costs and benefits of different land use and management options; and options for legislative change to support improved management of natural resources at the regional scale.

Members of each WAC are to hold office at the Minister's pleasure, that is they are appointed and can be removed at the discretion of the Minister: s 22B(2). In the KWAC it is relatively clear that any determination of the committee is taken by vote.

There is no statutory requirement of public notice of draft plans, and no right for the public to make public submissions. However a 5-week public comment period was allowed in the draft Katherine Plans and a community consultation report is available.⁴⁶

Theme 7: Legislation/policy providing for a level of Indigenous engagement and reference to native title

There are no specific provisions for Indigenous engagement in the NT legislation. This is in practice provided through the WAC processes. The initial process in the Daly River region was criticised as being inappropriate for Indigenous peoples to frame discussions, influence research and give their opinions as to values significant to them (Jackson 2006). An Indigenous Advisory Group has since been established.

In the NWC assessment of NT's progress in implementation, it was stated that 'much work needs to be done to improve processes for appropriate inclusion and consultation with Indigenous stakeholders. Often this requires engagement of external consultants and facilitators... consultation is a lengthy, often iterative process for which timetabling is difficult' (NWC 2007a p 39).

In relation to the Ti Tree Water Plan, the NWC commented that it was developed with 'little input from regional Indigenous interests despite continuous efforts to bring representatives to the WAC that directed the plan's preparation'. The plan therefore has been criticised for not adequately representing Indigenous interests. A review of the plan is near completion. Additionally, native title talks have resulted in one of three 'irrigation blocks' being held by local Indigenous interests (NWC 2007a p 39).

Theme 8: Transparency in decision-making

No specific policy or statutory provisions exist to require planning information to be made publicly available. As a matter of practice, this information is available online at the NRETA website.

Theme 9: Relationship between planning and political process clear

The Minister is empowered to declare a WAP: s 22B. As the WAC is clearly stated to have an advisory role, it is clear that the final decision-maker on plan issues is the Minister.

⁴⁵ <http://www.nt.gov.au/nreta/water/kwac/tor.html>

⁴⁶ <http://www.nt.gov.au/nreta/water/kwac/index.html>.

Theme 10: Guidelines for the use of mediation/negotiation/other conflict resolution techniques

The water legislation provides a conflict resolution mechanism which if implemented has great potential for redressing complaints over substantive as well as procedural matters. A person who is aggrieved by an action or decision of the Controller or Minister, apart from the exercise of their powers under s 93(3) or 5(6) (both provisions not relating to water planning) may apply to the Minister to review that matter: s 30.

There is no definition of the word 'aggrieved' in the NT legislation. The most frequently cited exposition of the meaning of 'aggrieved person' is that of Ellicott J. in *Tooheys Ltd v Minister for Business and Consumer Affairs* (1981) 4 ALD 277; 36 ALR 64. His Honour said

The words "a person who is aggrieved" should not in my view be given a narrow construction. They should not, therefore, be confined to persons who can establish that they have a legal interest at stake in the making of the decision. It is unnecessary and undesirable to discuss the full import of the phrase. I am satisfied from the broad nature of the discretions which are subject to review and from the fact that the procedures are clearly intended in part to be a substitution for the more complex prerogative writ procedures that a narrow meaning was not intended. This doesn't mean that any member of the public can seek an order of review. I am satisfied however that it at least covers a person who can show a grievance which will be suffered as a result of the decision complained of beyond that which he or she has as an ordinary member of the public (ALR 79; ALD 290).

In these circumstances, anyone who can show that he or she had been financially or otherwise affected more than an ordinary member of the public by a water planning decision may qualify as an 'aggrieved person' and may lodge an application for review. The Minister has the discretionary power to refer such an application to a Water Resources Review Panel: s 30(3)(b).

This Panel may be appointed at the discretion of the Minister: s 24. It is a high level body to advise the Minister in reviewing the Minister's own actions or those of the Controller. Its extensive statutory powers include the power to require attendance by any person who may be compelled to give evidence under oath, and the production of relevant books, papers or documents: s 30. Any person who fails to act according to the direction of the Panel is guilty of an offence and may be fined \$1,000.

The panel is to consist of 8 members, drawn from persons with relevant qualifications in Aboriginal affairs, bore drilling, industry, natural resources, environmental management, and health: s 24(3).

The work of each Panel is to be conducted by its Chair and not less than two other Panel members: s 24(2). The Chair is to hold office for three years but be eligible for reappointment.

There is potential for the Panel to be an important conflict resolution mechanism in water planning. No Panel has as yet been established in the NT. The legislation leaves it open for any person to challenge the validity of a WAP either on its merits or on judicial review. However, the scope for mounting a successful challenge is very slim. The main reasons for this are that there is no statement of objectives in the Water Act, few statutory requirements, thus a high level of discretion is available to the Minister.

Theme 11: Integration of plans

In a recent review of the water legislation, it was found that there is no clear relationship between the *Water Act* and other environmental or planning laws in the Territory (EDO 2005). There is no formal requirement for consultation between different Departments or agencies, nor are plans made under the *Water Act* integrated with other natural resource plans.

Integrated natural resource planning in the NT is largely an administrative task. The current NRM plan was prepared in 2005 by the Landcare Council of the NT.⁴⁷ Its implementation is guided by a resource investment strategy formulated for 2007-2010. Inland waters particularly groundwater systems and wetlands are acknowledged to be concerns for management, and the plan provides for long term 'aspirational' as well as shorter term targets. One such relevant target is to provide for WAPs for all water control districts by 2009, and to institute appropriate licensing outside of such districts.

There is no requirement that WAPs consider such plans. Although a recent assessment of water planning in the NT reports that the NRM plan informs water planning, there is no formal consideration of issues within the water planning framework set out in Figure 6 above. As NRM plans and their implementation become more complex, integration between both sets of plans will be an issue.

Catchment management is another matter on which the *Water Act* is silent.

⁴⁷ *Integrated Natural Resource Management Plan for the Northern Territory: Sustaining our Resources – People, Country and Enterprises* (Northern Territory Government, 2005). Appendix 9 of the Plan provides a brief overview of the effectiveness of current NRM legislation, but this is no longer available online. A review of the plan was intended to have taken place in 2008.

8. Analysis of framework for water planning in New South Wales

8.1 Brief history of development and legislation

Water for supplying new colonial settlements, watering sheep around south-west Riverina, mining gold in various parts of the State, navigating the Murray, settling the arid heartland – these were important considerations in the development of water resources in New South Wales (Lloyd, 1988). However as in the other parts of Australia, it was the needs of irrigation that were most influential in setting the direction for water administration and policy in the State.

Geographical, hydrological and historical factors resulted in a coastal versus inland 'divide' in NSW. Coastal areas east of the Great Dividing Range are generally wet, and inland western areas are generally dry. Despite 75% of rainfall occurring on the coast where 90% of the population now live, 80% of water use presently occurs in inland catchments. 90% of this is for irrigation.⁴⁸

Irrigation development inland has historical roots. Explorers saw the product of a 'good' year' and mistakenly thought that was the general weather pattern. Even so, early recommendations for irrigation focused on coastal rivers, but the Lyne Royal Commission on the Conservation of Water (1885-86) changed the course of irrigation in the state. At that time basic survey and hydrological information was lacking, 'largely explaining why geographical absurdities were presented as serious water schemes' (Lloyd, 1988, 168). Lloyd further observes

An important, although perhaps unintended consequence of the Commission's investigations was the irrevocable separation of the coastal rivers from the western rivers in policy terms ... consequently it failed to develop even a basic policy rational for coastal waters; its focus was on the river basins of the interiors. This created a fundamental policy division that has existed ever since, with the principal thrust of State water policy directed towards conservation and irrigation in the Murray Darling Basin. Policy reference to coastal rivers ... was largely incidental.. (1988, p 172).

The Royal Commission's priorities were directed to the needs of the pastoralists, followed by the production of small crops, and generally increasing the productive capacity of the land. Hugh McKinney, a British civil engineer who worked on irrigation in India, then the Royal Commission and later appointed head of the NSW Water Conservation Branch, was to change this ordering of importance. He gave priority to domestic and livestock needs followed by irrigation, mining, manufacturing and water power. As a result, irrigation was firmly impressed on the public consciousness as a major issue during the 1890s.

Drought at the turn of the century in NSW provided reason for the building of dams. The Murrumbidgee irrigation area was settled, and other irrigated areas were established in the State. Currently irrigation in the Murrumbidgee Valley and the

⁴⁸ Water statistics in this section are sourced from
<http://www.anra.gov.au/topics/water/overview/nsw/index.html>

southern Riverina-Murray Valley comprise over two thirds of total area under irrigation in the State (Pigram, 2006).

Irrigation water supplied from dams is 'regulated', and the rivers supplying them are similarly called regulated rivers. Rivers not controlled by releases of water from dams but dependent on rainfall and natural flows are 'unregulated'. Most of the inland western flowing rivers have regulated reaches, except for areas upstream of irrigation supply dams, tributaries and effluents of regulated rivers and sections of the main rivers below the regulated reach. Unregulated rivers include most of the coastal rivers, with the major exception of the Hunter (DNR, 2006).

North/South patterns of water use account for second policy divide. There is winter rainfall in the South and summer rainfall in the North resulting in different crops being grown. South of the Lachlan catchment, large public dams were built as part of the post-war reconstruction effort to provide for irrigation. By the 1960s, policy makers recognised that financial returns of these capital work programs did not justify their cost. Therefore to the north of the Lachlan, newer agricultural industries, mainly cotton, relied on smaller dams and private irrigation.

The *Irrigation Act 1912* (NSW) and the *Water Act 1912* (NSW) provided the legislative framework for allocation and management of water resources for much of the 20th century. In that time the pattern of water management was almost totally set by consumptive needs (Farrier and Mooney, 1999). There are eight major regulated river systems servicing predominantly irrigation development. In these systems, the river channel itself is the major water supply system from the one or more headwater storages. These systems occur in the Murray, Murrumbidgee, Lachlan, Macquarie, Namoi, Gwydir and Border River catchments in the Murray-Darling basin, and the Hunter River catchment on the coast. The major urban water supply schemes (for Sydney, Newcastle, central coast) are integrated systems that comprise of a number of dams and transfer works that divert water across basin boundaries. Smaller rural urban water supply schemes exist on the coast and the inland. Most of these do not involve diversion of water across basin boundaries.

Bond and Comino take the view that

water laws in NSW [were] developed and administered to enable maximum exploitative use of surface water resources, but within a system providing inherent flexibility and manageability. Law and policy facilitated growth in demand for water by keeping prices low to users and by exploring new sources of supply ... (2002, p 238)

By the late 1970s it became evident that water was significantly over-allocated, meaning that if all users requested delivery of water to which their licences entitled them, the demand would exceed water in storage. To address the problem of over-allocation, legal and policy reform occurred in the late 1970s, 1980s and 1990s. In that time, a crisis during 1991/92 where 48 waterways in the State had blue-green algal blooms, brought to public attention the serious degradation in water quality.

A number of measures were introduced from 1977 to 1999 to address these problems, the key ones being:

- Volumetric allocation schemes to impose a nominal limit on the volume of water extracted by licence holders from regulated streams in specified catchments
- Embargoes on new licences

- 'Shortage' powers to allow for water authorities to restrict or suspend extraction rights during periods of droughts or emergencies
- Environmental requirements to provide for the long term public interest of the State and Australia
- Institutional reform of water authorities
- Provision of principles of ecologically sustainable development in water management
- Introduction of floodplain management plans
- A system of transferable water entitlements (Tan, 2002, 2003).

By all accounts over allocation remains a serious issue in the State. There are 43 river basins in New South Wales and 17 of the 21 basins west of the divide form part of the Murray Darling Basin. Use in all 17 of the basins in the Murray Darling exceeds sustainable yield. Similarly two of the 49 groundwater management units are over committed based on current usage and a further 17 are overcommitted based on allocation.

8.2 Water planning framework

Following an extensive period of public discussion, the NSW government implemented the *Water Management Act 2000* (NSW) (Burchmore, 2000). Referred to as the WMA, it provides a water allocation and management framework. The WMA maintains the traditional separation of water and quality issues, but integrates management of surface and groundwater. Although water quality and salinity remain key indicators of ecosystem health for the purposes of the State Water Management Outcomes Plan (SWMOP), water quality is mainly dealt with under pollution legislation i.e. the *Protection of Environment Operations Act 1997* (NSW).

The WMA and the concepts which it makes provisions for are extremely complex. For example there are three ways which water sharing plans may be made, two reflected in the statute, and the third which is consistent with statutory provisions but found entirely in policy documents. Another example can be found in two categories of environmental water – planned environmental water, and adaptive environmental water. The later category comprises three different sub-categories with different applications: ss 8B-E. (Gardner, 2006).

One reason for the complexity is that water planning in NSW started in 1997, preceding the WMA. Some existing planning practices were subsumed into the legislation but others were not. As a result of several reorganisations of the department responsible for water, policy documents formulated by former departments are no longer publicly available. Another reason is that fine tuning of the operation of the WMA has also seen planning practices change. A third reason is that many of the concepts are new and evolving.

Under the WMA a range of statutory water management plans are available. They include:

- The State Water Management Outcomes Plan (SWMOP) made in 2002.
- Management plans for water sharing, water use, water source protection, drainage management or floodplain management.⁴⁹

The SWMOP provides the over-arching policy strategy and targets for the development, conservation, management and control of the State's water sources.

⁴⁹ Implementation Plans were also intended, but there is no evidence that these were made.

Chapter 2 of the SWMOP adopts the objectives of the WMA. It also extends the WMA in several areas including adopting water quality objectives related not only to human but aquatic ecosystem health. It emphasises that state policy and other state legislation, for example the *National Parks and Wildlife Act 1974 (NSW)*, requires that Aboriginal traditional and contemporary dependencies and cultural associations with water be protected and improved. For all of its objectives, long term outcomes and specific 5-year management targets for water management are provided. These are to be reviewed in 2007. However the SWMOP is a strategic document. No specific penalties are attached to a failure to meet these targets, apart from statement that it is a duty of all persons involved in the administration of the WMA to give effect to the SWMOP: s 9(2) WMA. The effectiveness of this duty is subject to judicial interpretation which as yet has not occurred. There are no statutory provisions in the SWMOP which constrain plan-making and no requirements for public participation.

This discussion therefore focuses on Water Sharing Plans (WSPs), which are a sub-group of water management plans. Other types of water management plans such as water use plans have not yet been developed. Until WSPs are completed and implemented for all surface and groundwater resources, the *Water Act 1912 (NSW)* and licences issued under that Act continue to have effect. Not long after many of the plans came into force they were suspended due to the drought. Although most are now operational, major regulated river systems including the Murrumbidgee and the Murray are still suspended. The effect of the suspension primarily relates to the allocation of water under the bulk access regimes but also applies to water trading rules.

Two other Acts have a relevant, albeit limited role in water management. The *Catchment Management Act 1989 (NSW)* (CMA) provides for catchment management through plans which do not have a statutory status and the manner of preparation is not specified (Mooney 2005). The catchment legislation has no direct effect on the allocation and management of water. However if a relevant water management plan provides, any water savings may be held by a catchment management authority set up under the catchment legislation and managed as adaptive environmental water: s 8D *Water Management Act 2000 (NSW)*.

The *Natural Resources Commission Act 2003 (NSW)* establishes the Natural Resources Commission that provides the Government with independent advice on natural resources management. The Commission, which is an independent body with broad investigating and reporting functions, is also charged with reporting on the effectiveness of WSPs vis-a-vis statewide NRM standards: s 43A *Water Management Act 2000 (NSW)*. These reports must be considered in any decision of the Minister to extend the life of a WSP. As at August 2008, no reports on WSPs are yet available.

The water legislation has been administered since April 2007 by a newly created Department of Water and Energy, and the Minister in charge is the Minister for Climate Change, Environment and Water.

Initially the focus was on developing WSPs to establish rules for sharing water between the environmental needs of the river or aquifer and water users, and also between different types of water use such as town supply, industry and irrigation. In addition, WSPs establish water trading rules for specified areas. More lately, attention has also been given to a sub-type of WSP called a macro plan. More details will be given to macro plans later.

Under the *Water Management Act 2000*, NSW has two categories of WSPs:

- Category 1 made with the involvement of a management committee;
- Category 2 – a Minister's plan made under s 50; including a macro plan which is a subset of a Minister's plan.

Many WSPs started out as Water Management Plans.⁵⁰ The process of making Water Management Plans started with the appointment of River Management Committees in August 1997 in priority areas in the state. Indicative environmental flow rules were provided to the River Management Committees as a basis for a 6-month community discussion period. If a consensus decision was not reached in that period, then the Indicative flow rules would apply (Tan, 2003; Spriggs, 1999). Irrigators, environmental groups, local government, and government agencies were represented on the RMC in each area. Initially a sole Indigenous person represented all of the Indigenous community.

The role of the River Management Committees was to develop a water management plan, and when the WMA was passed, the River Management Committees were reconstituted and a narrower brief was to deal with water sharing only.

One of the many issues that River Management Committees had to deal with was over allocation, especially in many inland groundwater areas. In 2000 the Minister approved a statewide policy to reduce all existing groundwater licences proportionately without any regard for whether the licence-holder had used the water (a concept commonly referred to as 'history of use'). This cut-back would not apply to town, domestic and stock licences. This policy was the basis for WSPs in five major inland groundwater areas (Lower Macquarie, Upper and Lower Namoi, Lower Murray, Lower Gwydir, Lower Murrumbidgee) approved in 2002 but not commenced. Following significant lobbying, a new Minister and a new Director General reversed the policy in 2003 allowing cut-backs to reflect history of use (Gardner and Bowmer 2007, Hamstead et al 2008). The five groundwater WSPs were amended and commenced in late 2006. A bitter row has erupted over the reversal of policy with farmers challenging the revised groundwater WSPs (Snow 2007).

Thirty-one WSPs relating to 11 regulated reaches of rivers and 20 unregulated sub-catchments commenced in 2004, covering about 80% of water extracted in the state (DNR, 2006). These plans were commenced as Category 1 WSPs but were eventually made as 'minister plans' or Category 2 WSPs. (Gardner and Bowmer 2007). This reversal in process led to litigation which is described below, and amendments to the WMA.

In June 2004 a major policy change was made regarding water planning. The Minister for Natural Resources announced that a 'macro' planning approach would be adopted, ie that planning would cover much larger areas than those previously adopted; and that water sharing arrangements would be completed quickly, thoroughly and cost effectively, building on the experience gained from community consultation during the first round of WSP (DNR, 2006). There was little consultation with stakeholders regarding the policy change (NSW Irrigators' Council, 2005). While a brochure informing the community about the macro approach was circulated in June 2005, detailed information regarding macro plans was given only in July 2006

⁵⁰ In some areas, a form of water planning commenced as early as 1995. For example in the Gwydir catchment, an Environmental Flows Committee was established to discuss flows to the Gwydir wetlands (Hamstead et al, 2008).

(DNR, 2006). There is no mention of macro plans in the State Water Management Outcomes Plan 2002, which is the over-arching policy document in NSW.

Thirty-nine macro plans progressively commenced from July 2007 (NSW Government, 2006). They cover unregulated water sources and groundwater.

There has been significant litigation over the first group of WSPs and 13 court cases were filed. As many canvassed the same issues, a system of case management resulted in two test cases being decided first. These were the Gwydir case discussed under Theme 1 and the Murrumbidgee case discussed in Theme 9. These test cases decided by the NSW Court of Appeal upheld water plans which were challenged, specifically the WSPs for the Lower Murrumbidgee Groundwater Sources and the Gwydir Regulated River Water Source. Special Leave was granted to the High Court in the Gwydir case, however, the case did not proceed to final hearing as the NSW government amended the *WMA* immediately before the hearing to retrospectively validate the plan as made.

Litigation over WSPs reached the courts through the judicial review process. Under this process, decisions have to be based on administrative law (Millar, 2003). It is not open for the Courts to decide on matters of merit (or substance). For the most part, administrative law cases are extremely technical and are decided on fine points of legal argument.

Not long after many of the plans came into force they were suspended due to the drought. The effect of the suspension primarily relates to the allocation of water under the bulk access regimes but also applies to water trading rules. As at 29 October 2008, several WSPs are suspended, including major regulated systems (Cain, pers. comm.).⁵¹ They include:

- Water Sharing Plan for the New South Wales Murray and Lower Darling Regulated Rivers Water Sources 2003, as of 10 November 2006
- Water Sharing Plan for the Murrumbidgee Regulated River Water Source 2003, as of 10 November 2006
- Water Sharing Plan for the Lachlan Regulated River Water Source 2003, as of 1 July 2004
- Water Sharing Plan for the Macquarie and Cudgegong Regulated Rivers Water Source 2003, as of 27 July 2007
- Water Sharing Plan for the Hunter Regulated River Water Source 2003, as of 29 December 2006
- Water Sharing Plan for the Wybong Creek Water Source 2003 as of 18 August 2006
- Water Sharing Plan for the Ourimbah Creek Water Source 2003 as of 22 December 2006.

⁵¹ It is difficult for researchers, let alone general members of the public to ascertain which WSP has been suspended. There is little or no information on the website maintained by NSW Department of Water and Energy on the suspension of WSPs. Anecdotally, only 4-5 remain suspended as at late November 2008 (Millar, pers. Comm.)

Suspension of plans has been met with consternation by stakeholders including irrigators and the NGO sector.⁵² The WSPs were underpinned by water resource data reflecting the 'worst drought on record.' Questions have been raised on the accuracy of the data on which the WSPs are based, the robustness of these plans for a range of climatic conditions, the implications for environmental health of rivers now that environmental flows and targets no longer need to be met, and the lack of transparency regarding the triggers for suspension and recommencement of plans (NCC NSW 2007).

8.3 Thematic analysis of planning

In the following analysis, discussion will centre on provisions which relate to the two categories of water sharing plans. Where there are points of difference, this will be made clear.

Theme 1: Planning objectives that provide for sustainability and adaptive management

The WMA's broad aims are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations. It then particularizes these aims in section 3 as:

- (a) to apply the principles of ecologically sustainable development;
- (b) to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality;
- (c) to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:
 - (i) benefits to the environment
 - (ii) benefits to urban communities, agriculture, fisheries, industry and recreation
 - (iii) benefits to culture and heritage
 - (iv) benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water
- (d) to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources;
- (e) to provide for the orderly, efficient and equitable sharing of water from water sources;
- (f) to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna;
- (g) to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users;
- (h) to encourage best practice in the management and use of water.

NSW is one of the few states that legislatively provides that 'the principles of adaptive management should be applied, which should be responsive to monitoring and improvements in understanding of ecological water requirements': s 5 (2)(h).. In addition, the concept of 'adaptive environmental water' is established by the WMA: ss 8(1); 8B; 8C. This provision is found in water management principles in the WMA.

⁵² See minutes of the Namoi Catchment Management Authority, 26/11/07 http://www.namoi.cma.nsw.gov.au/attachments/Minutes_meeting_37.pdf; and NGO Water Group convened by Nature Conservation Council of NSW, *Caring for our rivers report: A report on the operation of the Water Management Act (200), associated legislation and policies*, November 2007.

The list of principles is ambitious (Nheu, 2002). There is an attempt to make these principles enforceable – s 9 provides that the WMA is to be administered in accordance with these principles and the State Water Management Outcomes Plan.

Further, the following management principles in relation to water sharing are provided in s 5(3):

- (a) sharing of water from a water source must protect the water source and its dependent ecosystems; and
- (b) sharing of water from a water source must protect basic landholder rights; and
- (c) sharing or extraction of water under any other right must not prejudice the principles set out in paragraphs (a) and (b).

WSPs are to give priority to the principles in the order that they are set out: s 9(2). In giving priority to protection of the water source over any other right, it would appear that there is very strong protection given to water for dependent ecosystems. Yet this was not the reading of the NSW Court of Appeal which held that the provisions do not have the purpose of making invalid a management plan that is inconsistent with them (Millar, 2005; Gardner 2006).

The validity of the WSP for the regulated portion of the Gwydir River was challenged in *Nature Conservation Council of NSW Inc v The Minister Administering the Water Management Act 2000* [2005] NSWCA 9. Citing that the Ramsar-listed Gwydir wetlands were under threat, the Nature Conservation Council (NCC) challenged the WSP based on the environmental performance of the plan.

In its joint judgement, the NSW Court of Appeal firstly considered the objects of the WMA and said

The objects of the Act set out in s3(a) and s3(b), the water management principles set out in s5(2)(a)–(d) and 5(3)(a), together with the priority established by s9(1)(b) strongly suggest that the Parliament was concerned with matters of substance rather than form when it required the establishment of environmental water rules.

The court went on to consider Clause 14 of the plan which allocated water that was 'in excess of the long term average annual extraction limit' to fundamental ecosystem health.' One of the arguments of the NCC was that no actual water was set aside for environmental health. In defence the Minister alleged that it was sufficient for the plan to deal with an abstract concept of water. The court found that was cl 14 of the plan was inconsistent with the original provisions of the Act. In the judgement the court said that it was not sufficient for the Minister merely to deal with an abstract concept of water.

Having found the provision was inconsistent with the Act, the next question addressed by the court was whether the plan was thus invalidated. Applying a test developed by the High Court in the case of *Project Blue Sky Inc. v Australian Broadcasting Authority* (1998) 194 CLR 355 the NSW Court of Appeal held that the statutory provisions did not have the effect of invalidating a water sharing plan that was inconsistent with them. The High Court granted special leave to the Nature Conservation Council to appeal the decision.

Quickly, the state government moved in 2004 to amend the water legislation redefining environmental water, inserting a validating provision for plans thus

retrospectively resolving the matter. Its actions made the appeal redundant (Millar, 2005, Gardner, 2006). While this may have shored up the WSP in question, it leaves little confidence in the planning objectives and water management principles provided for in the WMA, and the standards discussed below.

Theme 2: Legislative/policy standards and procedures for statutory water planning

The WMA provides a large number of legislative standards and procedures for statutory water planning. However the effectiveness of these standards in their implementation will need to be evaluated in the light of the Gwydir case discussed above and the NSW government's response.

Mandatory provisions of water sharing plans are provided primarily in s 20 WMA but also in other parts of the Act. Section 20 must be complied with by all categories of WSP. It is given in full below.

S. 20 Core Provisions

- (1) The water sharing provisions of a management plan for a water management area or water source must deal with the following matters:
 - (a) the establishment of environmental water rules and provisions relating to adaptive environmental water for the area or water source;
 - (b) the identification of requirements for water within the area, or from the water source, to satisfy basic landholder rights;
 - (c) the identification of requirements for water for extraction under access licences;
 - (d) the establishment of access licence dealing rules for the area or water source;
 - (e) the establishment of a bulk access regime for the extraction of water under access licences, having regard to the rules referred to in paragraphs (a) and (d) and the requirements referred to in paragraphs (b) and (c);
- (2) The bulk access regime referred to in subsection (1) (e):
 - (a) must recognise and be consistent with any limits to the availability of water that are set (whether by the relevant management plan or otherwise) in relation to the water sources to which the regime relates; and
 - (b) must establish rules according to which access licences are to be granted and managed and available water determinations to be made, and
 - (c) must recognise the effect of climatic variability on the availability of water, and
 - (d) may establish rules with respect to the priorities according to which water allocations are to be adjusted as a consequence of any reduction in the availability of water, and
 - (e) may contain provisions with respect to the conditions that must (as mandatory conditions) be imposed on access licences under section 66 (1), including conditions providing for the variation, from time to time, of the share and extraction components of access licences, and
 - (f) must be consistent with the water management principles.
- (3) The rules referred to in subsection (2) (d) must comply with the priorities established under section 58.

- (4) The access licence dealing rules established under subsection (1) (d):
- (a) must comply with the access licence dealing principles, and
 - (b) must not deal with any matter for which the access licence dealing principles may make provision under section 71Z (2), and
 - (c) subject to paragraph (b) and the access licence dealing principles, may regulate or prohibit any dealing under Division 4 of Part 2 of Chapter 3.

The WSP must be consistent with SWMOP, environmental planning policy, and other government policy. An anomalous situation arose as the SWMOP was prepared at the same time as the WSPs and not before, therefore whilst it was gazetted shortly before the WSPs it was not, in reality an instrument considered by the committees when first considering the plans.

It is mandatory for the WSP to provide for a number of substantive matters including establishing environmental water rules. These rules must provide for identification, and establishment of 'planned environmental water': s 8(2). That term was redefined in 2004 to mean at least 2 of 3 different things:

- a commitment of a physical presence of water; or
- a reference to the long-term average commitment of water; or
- a reference to water 'left over' after basic landholder rights and extractive rights have been met.

There are detailed statutory standards for substantive matters. This is not the case for procedural standards, where there are limited and discretionary requirements. The *WMA* provides the Minister with wide powers in relation to the *procedures* of water planning. This discretionary process is set out in Figure 6 below. Amongst the Minister's discretionary powers are:

1. The Minister is to establish a management area, with fixed boundaries: s 11. The latter requirement is most important as there is no statutory requirement that water management areas be consistent with catchment boundaries. The *WMA* empowers the Minister to declare any land a water management area without any restrictions. Therefore many WSPs are not catchment based.
2. The Minister may direct a committee to prepare a draft management plan: S 15 (1). This is discretionary and in macro plans, the committee process is not utilised.
3. The committee is to work to set terms of reference. The terms of reference are critical.
4. If the committee fails to prepare a plan in accordance with set TOR, the Minister may use step in powers under s 50 to make a Minister's plan. This may occur at any time whether or not a draft WSP has been submitted by the management committee, the only condition being that the use of these powers has the concurrence of the Minister of the Environment. Since mid 2007 the portfolios of water and the environment have been the responsibility of the same Minister. Under

NSW Administrative Orders the concurrence power is with the Minister for Primary Industries.⁵³

⁵³ Concurrence means the agreement by another Minister or government agency.

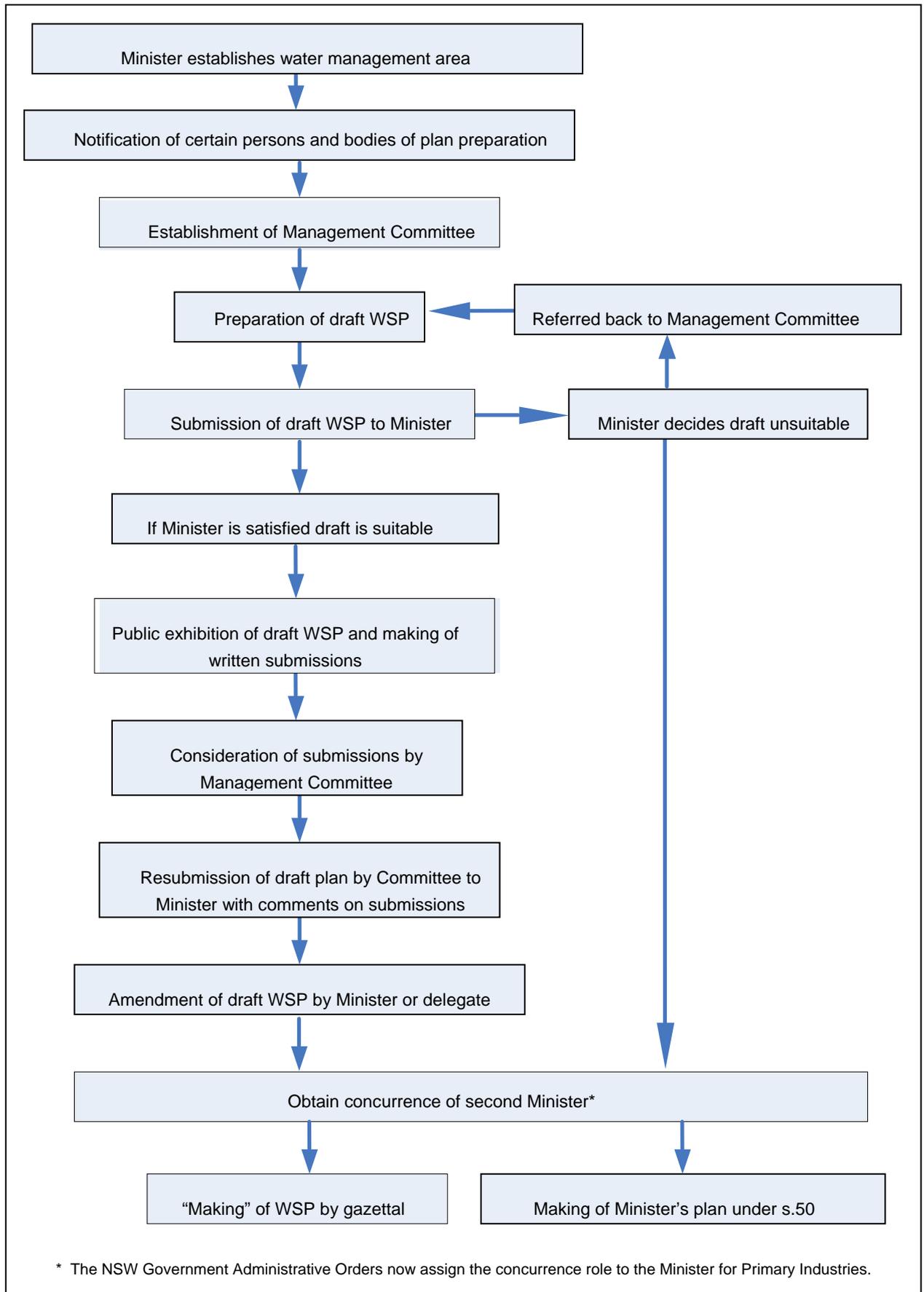


Figure 6: Statutory process for non-macro WSP

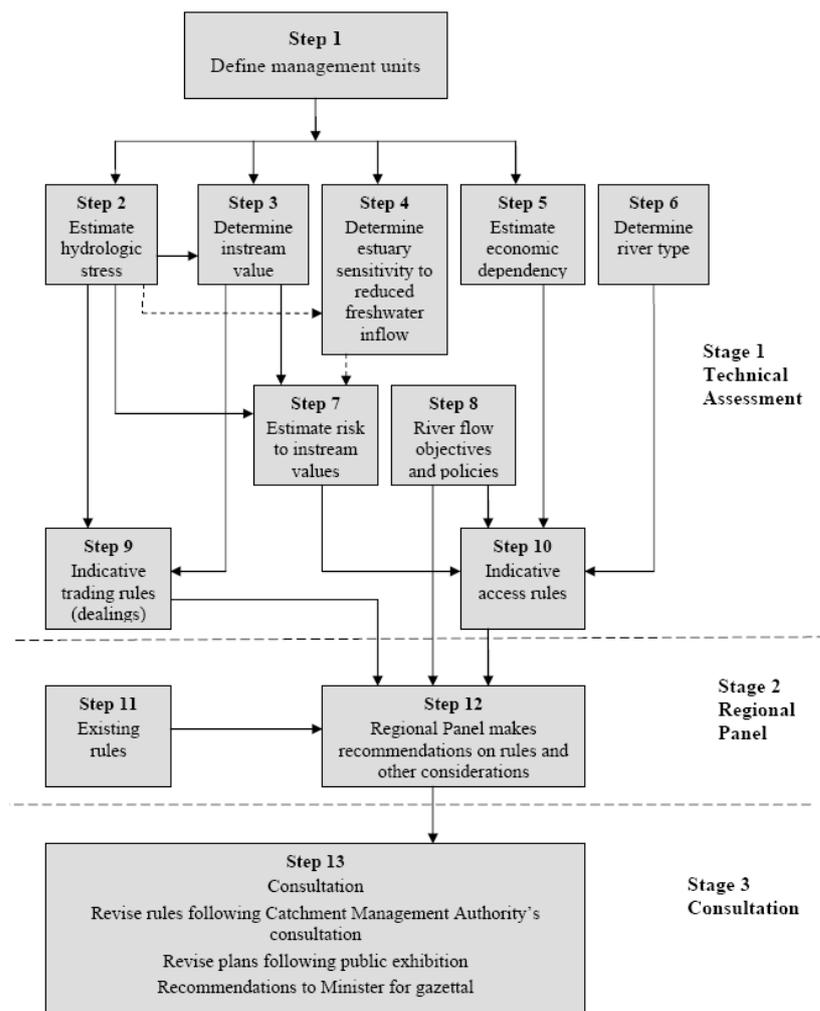
Given the discretionary powers of the Minister, the macro-planning process introduced in 2005 did not require any legislative amendment. The process set out in policy documents (Department of Natural Resources 2006) is given below. The macro approach may or may not be catchment based. Generally draft macro plans:

- are prepared by the Department;
- cover unregulated rivers or across a coastal bioregion for freshwater aspects of estuarine areas over much larger planning areas than previous WSPs;
- establish a larger extraction management unit (EMU) comprising one of more water sources and sub-divided into smaller management zones;
- are based on technical assessments on hydrologic stress, in-stream values, by the DNR;
- consider the volume of water extracted, the economic value and social benefit of water extracted as determined by DNR and DPI;
- determine indicative trading rules and indicate water access rules.

The DNR and other agencies carry out community consultation on draft macro plans. This will be considered in Theme 6.

Figure 7: Policy process for macro WSP

(source: Harris et al, 2006 and DNR, 2006)



Theme 3: Legislative/policy allows for reasonable deadlines

For the initial round of water management planning in 1997-98, a six-month period was given by the NSW Government for River Management Committees (RMCs) to reach a decision by consensus on indicative water rules. This deadline imposed an enormous level of pressure on RMCs and several requested extensions of time to reach a decision (Sprigg 1999, Tan 2003).

The NSW Government's Implementation Plan for the NWI states that it has substantially completed WSPs for existing overallocated water systems in the state. By 2005 it had started an internal review of existing plans to ensure that were NWI compliant. This was completed by 2006.⁵⁴

NSW had provided that each WSP would be reviewed by the Minister within the fifth year after it was made to ascertain whether its provisions remain adequate: s 43(3). As 31 WSPs commenced in 2004, there will be considerable pressure arising from this 5 year review deadline. Amendments to the Act were introduced in 2005 to provide for extension of WSPs. Plans may be extended on the recommendations of the Natural Resources Commission (NRC): s 43A. The NSW Implementation Plan makes very clear that for 31 plans that had commenced, a review would be conducted as soon as possible after 2009 (that is, 5 years after commencement) by the NRC in the context of catchment health. Depending on the advice of the NRC the Minister will decide whether to extend each WSP or to make a new WSP (Government of NSW, 2006).

To complete water sharing arrangements 'quickly, thoroughly and cost effectively' the NSW government adopted a pragmatic approach in the formulation of macro-plans (DNR 2006, p4). It achieved this goal. One of the main strengths of the macro approach is its completion for a large number of water sources 'in a relatively short timeframe (and with comparatively few resources)' (Hamstead 2008, p100). Take for example the Lower North Coast WSP process. From public records it is unclear exactly when it commenced. However targeted consultation to provide background information to stakeholders started in October 2005 (DNR 2007). Public exhibition of the draft WSP took place in October 2007, and the WSP was expected to take effect in June 2008.

The direction taken in NSW points to streamlining of processes. It appears to shelve the more time-consuming processes of Category 1 WSPs in favour of macro-planning. One of the ways that the water planning process in macro-plans has been streamlined is considered below.

Theme 4: Whether socio-economic or other analysis is required

Two years after water management planning was initiated in the state, a taskforce was established to report on a suitable methodology to assess socio-economic impacts of water reforms. The Independent Advisory Committee on Socio-economic Analysis (IACSEA, 1998) set out a framework for management committees, and a guide with detailed methodological advice. It envisaged that committees would call on government agencies and consultants for detailed work, with the IACSEA providing ongoing support to the committees to ensure credible socio-economic analysis was carried out. Important steps in the assessment included reporting to the government and the community on

⁵⁴ The National Water Commission's assessment of NSW water reform process is discussed under Theme 5.

recommendations, and monitoring evaluation and adjustment of management activities to determine whether implementation progressed as planned.

Despite this, the economic impact of draft WSPs continued to be questioned by communities. In response, a new socio-economic review committee was established in 2002 to review the adequacy of assessments (Hamstead et al 2008). An independent assessment was commissioned to clarify matters such as the appropriate baseline for measuring changes to water availability, interpreting changes in extraction resulting from draft plans, and translating the changes into regional impacts (ACIL, 2002).

Under the WMA, due regard of several matters is required:

- Socio-economic impacts of the proposals in the draft plan
- Provisions of any relevant catchment action plan
- How activities occurring or likely to occur outside the plan areas may affect the management area or the water source in the area: s 18.

However, this statutory requirement only applies if a management committee is established by the Minister: s 18. Therefore these procedural safeguards strictly do not apply to macro plans or plans made by the Minister under s 50.

At least six challenges to WSPs in 2003 by irrigators involved dissatisfaction with socio-economic assessment as their central theme. They believed that the water management committees failed to consider social and economic impacts of providing certain environmental contingency allowances while preparing the plans (Millar, 2003). The challenges were dropped when test cases of the Gwydir and Murrumbidgee were not successful.

The macro-planning process does not expressly consider socio-economic reports. In the technical assessment phase, the focus is mostly on bio-physical data (Bowmer et al 2006, p 17). As management committees are not utilised in the macro process, there is no statutory requirement that socio-economic impacts are considered by the decision-maker. A review of the macro process states that the approach:

... is one of static description rather than dynamic analysis. It puts in place a method for generating an understanding of the current status of the river and its communities. **However, it does not provide predictions of outcomes arising from alternative water sharing arrangements, or comparative consideration of the values society holds for the outcomes of alternative water sharing arrangements relative to the outcomes arising from a continuation of the current management regime** (emphasis in the original Bowmer et al 2006, p 17).

In view of expectations flowing from IACSEA's report, and from ACILs review, it is highly likely that socio-economic assessment will remain a contested matter in NSW. Theme 8 continues discussion on these matters.

Theme 5: Community engagement in gathering and assessing scientific data; communication of science in water planning

The objectives of the WMA (which include to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity; and to encourage best practice in the management and use of water) cannot be achieved in the absence of best available scientific

information. The practice of adaptive management, based on monitoring and improvement, is predicated upon the availability and use of best scientific data.

The NWC's 2005 National Competition Policy assessment of water reform progress (National Water Commission 2006) found that in the preparation of its WSPs NSW did not use best available science. Ecological information was often generic, lacked sufficient detail in relation to the catchments, therefore planning committees were not able to determine the flow requirements needed to maintain ecosystem health (National Water Commission 2006, Gardner and Bowmer 2007). A slightly different observation is made by Mooney, in her analysis of the NSW water plan preparation, which states 'best science was available and it wasn't used.' (2005 p269).

This author considers that in NSW there is no express obligation for plan making to rely on best available scientific information. Neither does the statute provide for an explicit technical assessment phase, for WSP although policy documents for macro-plans point expressly to this phase (Department of Natural Resources, 2006). Consequently there are no provisions either in the legislation or in policy regarding community engagement in gathering and assessing scientific data.

There are only three references in the WMA to scientific knowledge. All refer to the change in water plans, typically the provision of additional water to the environment, because of the provision of 'more accurate scientific knowledge': s 43A(3)(b), 46(1)(b) and 87AA(6).

In the late 1990s, the NSW Department of Land and Water Conservation's 'stressed river process' was explicitly based on using the 'best data available' (DLWC 1998 p 9). Using this data, regional scientists, technical experts and expert panels with inter-agency representation provided a rapid desktop analysis of stress levels. Then River Management Committees (RMC) reviewed the classification of each stream using additional field assessment where appropriate (Department of Land and Water Conservation, 1998). As noted earlier the RMC process has been dismantled and rolled into Water Management Committees. Although decision-making procedures adopted by these management committees could be improved, the committees were an important avenue for community engagement in assessing scientific data.

The practice in Category 1 WSPs was to allow an Independent scientist to sit on the management committee. Although this was not the case for all WSPs, where it occurred it was found to be very useful to address queries from the committee (Tan, 2003).

For macro plans, there is a formalised multi-agency approach in the technical assessment phase. Before a draft macro plan sets indicative rules it is subject to advice from Regional Panels (see Figure 7 above) comprising of DNR, Department of Environment and Conservation (now Department of Environment and Climate Change, DEC), the Department of Primary Industries (DPI) with assistance from Catchment Management Authorities (CMAs) (Department of Natural Resources 2006). The object of this advice is to overcome problems of lack of data or the quality of data. In practice, the CMAs role on Regional Panels is that of observer status only (Hamstead et al, 2008).

In the 2005 National Competition Policy assessment of water reform progress, the NWC made findings and recommendations for water planning in NSW.

These related to improving ecological science used to inform decision making; improving transparency in planning processes and in trade-offs; and monitoring outcomes of water sharing rules and environmental allocations where water plans exist (National Water Commission 2006). The NWC recommended a suspension of the 2004-2005 competition payments to the state.

Prior to this suspension, the NSW government had commissioned an independent expert panel to review macro planning. The panel of four had expertise in water policy, environmental and resource economics, freshwater ecology and water reform/community consultation and planning. They also had relevant experience with water reform process in NSW and Victoria (Bowmer et al 2006). Partly as a result of the review conducted by the panel, in September 2007 \$13 million was paid following NWC being satisfied that the state had demonstrated sufficient progress to recoup the payments (National Water Commission 2007b). The review conducted by Bowmer and her team was expressly mentioned by the NWC (2007a).

Bowmer's report notes that the Macro process 'as it stands does not set out to improve ecological science – merely to access existing knowledge and use it effectively' (2006 p 38). More critically, the report highlights that the macro process has the capacity to satisfy the NWC's concern only *'in catchments in which there is not strong competition for water'* (italics added, *ibid*). The report made nine recommendations improving the adequacy of ecological sciences. The NSW government advised that it agrees with the recommendations of the expert panel (National Water Commission, 2007b).

Theme 6: Legislation/policy providing stakeholder engagement

The objectives of the WMA expressly recognise 'the role of the community, as a partner with government, in resolving issues relating to the management of water sources': s 3(d). With the enshrinement of community partnership as a concept, stakeholders have reasonable expectations that they are a legitimate partner with government in water planning processes. Yet stakeholder engagement under the WMA is discretionary for all categories of WSPs. The Minister may establish a management committee to carry out a specific task according to set terms of reference: s 12. This provision applies to all aspects of water management including water sharing. The Minister has wide powers over the establishment of the management committee, including abolishing the committee at any time whether or not it has completed the task for which it was established: s (12)(3).

The membership of the management committee is interest based: s 13. Paired (at least 2) representatives of environmental groups, water user groups, local councils, Aboriginal persons, agency representatives, and an independent chairperson make up a committee of at least 12 but not more than 20 persons. As far as practicable, members are to reside in the water management area. It is unclear whether the 'interest' representatives have an obligation to consult with an 'interest group' (Mooney, 2005 p 272).

The management committee is to strive for consensus in reaching decisions, but where this is not possible a majority vote determines a decision: Sched 6. However a decision to submit a draft management plan to the Minister is required to be unanimous. Besides these requirements, there was little clarity about processes at the start of the planning process and some committees thought that they were a decision-making body. This was found in the Gwydir

Regulated River Committee (Hamstead et al 2008) and also the Murrumbidgee Groundwater committee as discussed in Theme 9.

Besides the formal WSP consultative process, in many of the Category 1 WSP processes the NSW Environmental Protection Agency carried out consultation on draft River Flow and Water Quality Objectives. In the Gwydir, one meeting was held for the general community, with a separate meeting for the Indigenous community (Hamstead et al, 2008).

A statutory requirement of public notification of draft plans applies: s 38. If the Minister is satisfied that the draft plan is suitable for public exhibition, notice is to be published in state-wide and local newspapers. Any member of the public may make a submission on the draft plan. A submission period of at least 40 days applies.

A detailed policy document exists for Macro plans but stakeholder engagement is circumscribed, and carried out after rules are proposed. Although CMAs are charged with managing the consultation process throughout the state (Department of Natural Resources 2006), in practice DNR remains in control of the process. Generally targeted meetings are held by DNR after the Regional Panel has recommended rules. For example in the Hunter macro planning process, meetings were held with water user associations, the local urban water authority, a state conservation group, and a regional Indigenous community network *after* rules had been proposed. The Panel did make changes to the rules before public exhibition (Hamstead et al, 2008). When a draft plan is prepared, the minimum statutory requirements of public notification and the right of submission apply. One public meeting was held in the Hunter. (Hamstead et al, 2008).

An expert review of the macro-planning approach suggested that community consultation in the macro approach could be improved in the following manner:

- Early and wide notification of the start of the planning process should be made so that the general public is made aware of the significance of the plan.
- Stakeholder assessment should be carried out to ensure that an adequate sample of the community be consulted.
- Mechanisms for information transfer from community consultation to the Regional Panels need to show that issues have been considered, and either acted on or discarded. This needs to be documented, and explained to the community.
- Supporting manuals are available to the Panels and plain English report and summary score-cards available for the community, clearer data should be available to clearly explain the operation of the 'risk matrix' especially how decisions were made where there is inadequate base-line data.
- Community consultation should occur as early as possible in the planning process with the express purpose of canvassing stakeholder views on issues which needed to be addressed in flow rules (Bowmer et al, 2006).

Theme 7: Legislation/policy providing for a level of Indigenous engagement and reference to native title

NSW water legislation specifically refers to the need to:

‘recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:

- (i) benefits to the environment, and
- (ii) benefits to urban communities, agriculture, fisheries, industry and recreation, and
- (iii) benefits to culture and heritage, and
- (iv) benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water.’ S.3 WMA

Special provisions exist in reference to Indigenous people. The question remains whether these provisions are sufficient to recognise and foster benefits to the Aboriginal people in relation to water at the same time as achieving the other benefits enumerated in Section 3, within the constraint of sustainable and efficient use. In practice it may be impossible to evaluate whether these objects have been met.

Firstly a native title holder is entitled under the WMA to take and use water in the exercise of native title rights without the requirement of a licence or administrative approval: s 55. This right extends to the construction of water supply work (meaning water pipelines or pump) on native title land alone. The right does not extend to the construction of a dam or bore without an administrative approval. These native title rights are classified under ‘basic landholder rights’ with domestic and stock rights⁵⁵ and harvestable rights.⁵⁶ These rights are consistent with native title rights under the *Native Title Act 1994 (Cth)*. WSPs give effect to this by allowing the bulk access regime to allocate water under the Plan to native title rights. However, in almost all of the plans no water is allocated for these uses (Millar, pers comm.)

Secondly, the WMA specifies that at least two Aboriginal persons be appointed to a management committee: s 13(1)(s). Apart from this, the legislation does not make further provisions for Indigenous engagement in Category 1 WSPs. As discussed previously, the establishment of a MC is at the discretion of the Minister. In the Gwydir Regulated River MC, asking two Aboriginal representatives to comment on Aboriginal interests generally was found to be difficult and culturally inappropriate (Hamstead et al, 2008).

Thirdly, in the Macro approach, policy statements accept that Indigenous values not only relate to cultural and spiritual interests but include commercial use of water. Specific Purpose Licences which will include Aboriginal cultural and Aboriginal commercial licences. Special Purpose Licences are generally not able to be traded.

⁵⁵ Domestic and stock rights allow an owner or occupant of land to take water from an adjoining river or stream, or from underground sources, and to construct and use water supply works. Water is to be used for domestic consumption and stock water purposes only. Such uses relate to current landholding but not for new subdivisions of land, and exclude stock kept for intensive commercial purposes. These rights existed under previous legislation and were continued under s 52 of the WMA.

⁵⁶ Harvestable rights allow an owner or occupant of land within a designated area to construct and use a dam for capturing and storing rainwater without the need for a licence or administrative approval. These rights are established under sections 53 and 54 of the WMA. The area where these rights apply and the formula for calculating the rights are determined by an order in the Gazette.

From policy documents it appears that Aboriginal cultural licenses will be granted as a matter of course.⁵⁷ They allow holders a small volume of water as they are capped at 10 ML per licence per year. The uses to which these licences can be put are also limited. They may be used for:

- Traditional activities such as manufacturing traditional artefacts, hunting, fishing, gathering, recreation, cultural and ceremonial purposes.
- Domestic requirements such as drinking, food preparation, washing, and watering domestic gardens.

It is suggested that the benefits of these licences will only be of benefit to communities which are not able to successfully prove the existence of native title. Native title holders will be able to establish rights for traditional activities and domestic requirements under the *Native Title Act 1993* (Cth). It is unclear whether these licences are granted to a community through an incorporated body or to individuals.

Aboriginal commercial licences are the first of their kind in Australia. They may be granted over surface or groundwater and used for any general commercial purpose including aquaculture, irrigation and manufacturing. Unlike other Specific Purpose licences, Aboriginal commercial licences can be traded, but there are conflicting policy statements on this matter.⁵⁸ Limitations on these licences are:

- They may not be granted over inland rivers which are already stressed.
- They may be granted over higher flows in coastal rivers. This term is explained as applying to peak or flood flows and flows that occur for at least 50 percent of the time.
- On the total volume that can be extracted for Aboriginal commercial purposes within each water source. The limit would be a proportion of the river flow, and would not exceed 500ML per year.

Fourthly, an Aboriginal Water Trust was set up with five million dollars to support those who want to participate in the commercial water market.⁵⁹ Investment guidelines apply, for example applicants must have a business plan and be Aboriginal individuals, Aboriginal corporations, or Aboriginal Partnerships with 51% Aboriginal owned. Funding may only be used for matters such as Water conservation, Water-based infrastructure, Professional business services, Water-based equipment, Water Licence purchase supported with a Business Plan, Start-up business costs, acquisition of expert water skills and knowledge, and knowledge and capacity-building in Aboriginal water knowledge.

These initiatives are recent and innovative. How they are implemented, and whether they go some way towards addressing the desire for Indigenous people to participate in economic benefits associated with water remains to be seen. In assessing community engagement in the macro-planning process an expert team states that 'Indigenous involvement seemed to be a gap in the process' (Bowmer et al 2006, p 33). Currently Aboriginal commercial licences have small volumes attached and

⁵⁷ http://naturalresources.nsw.gov.au/water/info_aboriginal_water.shtml (3 February 2008)

⁵⁸ For example the on-line information at the DNR website allows for trade for Aboriginal commercial licences, but the DNT pamphlet dated June 2006 and also available online at http://www.northern.cma.nsw.gov.au/pdf/aboriginalfs_final.pdf states that 'like all Specific Purpose licences, Aboriginal commercial licences cannot be traded.'

⁵⁹ http://naturalresources.nsw.gov.au/water/ind_water_trust.shtml

appear to be subject to general limitations applicable to all other licence applicants. An initial assessment is that the real benefit comes from support through the Water Trust.

It pays to bear in mind the Principles and Protocols for Aboriginal involvement in the planning process articulated in the Boomanulla Conference:⁶⁰

1. Any planning must respect the timeframes of Aboriginal people. This must be defined and honoured in future protocols.
2. Aboriginal identity and traditional ownership and custodianship must be recognised in natural resource planning process.
3. Aboriginal culture and values must be identified, respected and incorporated in natural resource planning and implementation.
4. Aboriginal knowledge about vegetation, water and catchments must be recognised as important and where appropriate, active measures must be made to ensure legal protection of community intellectual property rights.
5. Cultural diversity must be respected – there is not one Aboriginal community, culture or and view. Culture and traditional practices differ across communities.
6. Aboriginal people are major stakeholders in natural resource management, because their lives and spirituality are related to the land. This should be acknowledged in any consultation process.
7. The economic benefits that flow from natural resource management must be shared with Aboriginal communities, as Aboriginal people have a traditional custodian's right in relation to natural resources, which they never have given up.
8. Plans which affect the lives of traditional owners must be made on the basis of their informed consent.
9. In recognising the rights and interests of Aboriginal people, government (and other) agencies must be preferred to "negotiate" with Aboriginal people – not merely "consult".
10. Biodiversity must, as a minimum, be maintained at its current level.
11. The only Aboriginal people who can legitimately speak for country are those who are authorised by community leaders in their country and in accordance with any agreed community protocols for nominations and representation.

Themes 8: Transparency in decision-making

There are few provisions in the *WMA* and policy documents in early water planning which address this issue.

In the first place the *WMA* gives wide discretionary powers to the Minister in terms of process issues.

⁶⁰ The conference was attended by approximately 55 natural resource representatives from Aboriginal communities in NSW, to prepare a statement about Aboriginal peoples' expectations of the N.S.W governments planning process for water, catchments and native vegetation in 2001-2002. It was held in Canberra in March 2002.

Further the Minister is given powers to refer a draft WSP back to the committee for further consideration if he or she 'is of the opinion that the draft plan does not comply with the requirements of this Part [of the *WMA*]: s 37(2). As the reference is likely to direct the committee to specific areas in the draft plan that the Minister believes are not satisfactory, it is unlikely that the Minister's powers to refer will be challenged. In the event of a challenge it could be argued that the Minister's opinion may not be overturned unless it was so unreasonable that no other person would have reached that decision based on the available information.

The Minister has at any time the power to make a plan (a Minister's Plan) under s 50. As originally enacted in 2000, Minister's plans were required to comply with the requirements that applied to all other WSPs. However s 50 was amended in 2002 to provide that the Minister need only deal with these requirements in general terms. Section 50 was further amended in 2004 to further dilute compliance (Millar 2005). Currently, certain of the procedural safeguards that apply to Category 1 WSPs do not apply to a Minister's Plan. These include notification requirements in s 36, and public exhibition and submissions in s 38. However the Minister may choose to adopt any of these safeguards. The making of a Minister's plan was one of the first controversies of the implementation of the NSW system. This will be discussed under Theme 9.

Some provisions that do provide for transparency are:

- All public submissions on a draft plan are to be considered by the committee, who are to provide comments to the Minister: s 40.
- Before making alternations to a resubmitted draft plan, the Minister is obliged to consult with the committee.

Some stakeholders believed that government had already set the agenda and was paying lip service only to committee views. It was a general view that the largest impediments to the process were lack of basic information, particularly on water use, and scientific and socio-economic information.

In addition while the DLWC was generally praised for its overall technical support, the DLWC head office was seen as a 'black box' (Hamstead et al, 2008 p 87). Decisions taken by the committee were overturned and changed by people who had no understanding of local issues.

A key issue that negates transparency is that several sectors in the water planning process continue to lobby the Minister directly. This was seen as detrimental to the planning process by stakeholders in a study of the Lachlan, Namoi, Barwon-Darling and Macquarie plans (Spriggs, 1999) and also the Gwydir (Hamstead et al, 2008).

Transparency was one of the issues raised by the NCC in their 2005 assessment of NSW water reforms. From interviews conducted with government agency staff, a recent assessment of water planning notes that transparent trade-offs was one of the strengths of the macro planning process. Transparency was primarily a result of using a risk matrix which weighs up environmental and economic values (Hamstead et al, 2008). Considering the differing interpretations of the word 'transparency' it will be useful for the NWC to clarify whether NSW's risk assessment is sufficient to constitute a transparent process.

Theme 9: Relationship between planning and political process clear

Millar writes that many members of initial advisory committees set up as river management committees involved in Category 1 WSPs felt that the Minister had

misled them as to their role in the plan-making process (2005). The water agency attributes this to confusion caused by the significant policy void going into the process. 'There was a desire to seize the momentum and move forward with water sharing plans as soon as possible. In the end a more considered approach, where policies were established and information gathered prior to the commencement of the community process would have saved time and angst' (Hamstead et al, 2008, p 86).

Confusion over the powers of the Minister under s 50 led to a legal challenge in *Lower Murrumbidgee Groundwater Preservation Association Inc. v Minister for Natural Resources* (2004) NSWLEC 122, on appeal (2005) NSWCA 10. The Lower Murrumbidgee Groundwater WSP applied to three related aquifers – the Shepparton, the Calivil, and the Renmark. The whole groundwater management area was identified at high risk of overallocation and other threats. In 1998, the Respondent Minister established the Murrumbidgee Groundwater Management Committee, with a view to creating a water management plan for groundwater sources by means of community consultation.

As will presently appear, the Minister did not, in the event, invoke the statutory mechanism for drafting a plan by such a committee, but proceeded by the alternative statutory route of a Minister's Plan.

Two grounds for challenging the WSP are relevant to this discussion.

(1) That uniform reductions of groundwater entitlements do not achieve the objective of limiting extractions to sustainable yield.

The WSP introduced measures to reduce groundwater use. It imposed a cut in entitlements for all three aquifers. Evidence was introduced which showed that there was low interconnectivity amongst the aquifers and only one of them was severely over-allocated. However it was accepted by the Courts that State policy at that time provided for uniform cuts. McClellan CJ sitting at first instance in the Land and Environment Court had difficulties with understanding the formula for reduction. He said:

There is no disagreement between the parties as to the intended effect of the Plan, although I have adverted to the difficulty in understanding its complex provisions. It is regrettable that a Plan intended to control a farmer's access to water has been expressed in a manner so complex that anyone seeking to understand it is given an extraordinarily difficult task. I very much doubt whether most people affected by the plan could ever understand it. As will emerge, an already complex document is made more difficult by the fact that if the literal meaning of some clauses is adopted, the plan cannot operate.

(2) The appellants argued that the Minister in using his power under s 50 Minister acted for an improper purpose.

The evidence showed that the committee in place had undertaken consultation and deliberation. The judgements do not make clear whether a draft plan was ever sent to the Minister for approval. What is clear is that the final WSP was made by the Minister under s 50. The irrigators argued that s 50 should be seen as a backup mechanism. By utilising the power as he did, it was argued that the Minister acted for an improper purpose seeking to avoid the input of a management committee appointed in accordance with the Act. In the Land and Environment Court, McClellan CJ ruled that a finding that the Minister acted for an improper purpose is not lightly to be inferred. The Court of Appeal upheld the judgement saying that 'there is nothing in the legislative scheme [that] suggests that a Ministerial plan under s 50 is in any way

a secondary, subordinate form of making a plan, or that the power to make such a plan is one only to be exercised as a matter of last resort.'

With the Court of Appeal's decision in the Murrumbidgee case, the relationship between planning and the political process is now clarified. While Category 1 WSPs may be the product of a planning exercise, at any time the Minister may use his step-in powers under s 50.

More recently, policy documents clarify that the decision maker in macro planning is the Minister (DNR 2006).

Theme 10: Guidelines for use of mediation/negotiation/other conflict resolution techniques

The concept of consensus decisions sets the water planning process in NSW apart from the processes elsewhere in Australia. Adopted as a means of dispute resolution, it was made known in August 1997 that River Management Committees were to reach decisions by consensus (Spriggs 1999, Tan 2003). A great many RMCs were unsure what this meant, and no definition or interpretation was given to them (Spriggs 1999). This omission is difficult to justify given that the literature on consensus building is voluminous and well known.⁶¹

In principle, building consensus amongst a community group is an ambitious and praiseworthy goal.

[It] is a process of seeking unanimous agreement. It involves a good-faith effort to meet the interests of stakeholders. Consensus has been reached when everyone agrees they can live with whatever is proposed after every effort has been made to meet the interests of all stakeholder parties. Thus, consensus building requires that someone frame a proposal after listening to everyone's concerns. Participants ... have both the right to expect that no one will ask them to undermine their interests and the responsibility to propose solutions that will meet everyone else's interests as well as their own.

Most dispute resolution professionals believe that groups or assemblies should seek unanimity, but settle for overwhelming agreement that goes as far as possible toward meeting the interests of all stakeholders...It is absolutely crucial that the definition of success be clear at the outset of any consensus building process (Susskind et al, 1999 p 7).

For consensus building to work, a number of strategies need to be put in place including conflict assessment, the use of independent facilitators or mediators, clarifying the roles of all participants, and setting ground rules. In NSW this mechanism was put at risk from the start as a number of these strategies were not in place, although independent chairpersons were appointed, and in some cases professional facilitators were called in.

It is acknowledged by professionals that consensus building can take a number of years. A critical factor in NSW was that an initial decision was to be made 6 months from when the RMCs were set up, with an agency participant saying that 'everyone was really resentful' about this, especially in circumstances lacking hydrological, ecological, social and economic data.

⁶¹ This is addressed in Volume 2 of this report. See also references and resources in L Susskind, S McKernan, J Thomas-Larmer (eds), *The Consensus Building Handbook*, Sage Publications, California, 1999.

Statutory guidelines now exist for Category 1 WSPs in relation to decision-making. Schedule 6, WMA applies to all management committees. A majority of members constitutes a quorum. All members present are to strive for a consensus. A unanimous decision is only required where:

- a draft management plan is referred to the Minister: clause 12 (3)(a), Schedule 6, s. 37);
- after consideration of public submissions, the draft management plan is resubmitted to the Minister: clause 12 (3)(a), Schedule 6, s.40; or
- where the order establishing the committee requires a unanimous decision: clause 12 (3)(b), Schedule 6.

For all other decisions, where a consensus was not reached, the Minister would accept decision by majority of members.

Apart from consensus building, the WMA provides for judicial review of management plans. Proceedings must be commenced within a three month window, and only in the Land and Environment Court: s 47. This period cannot be extended. It will be apparent from discussions on the Gwydir and Murrumbidgee cases that the judicial review process may be unsatisfactory to stakeholders as matters of merit cannot be considered by the court.

In Category 2 WSPs, ie for Minister's Plans and macro plans, apart from judicial review, no other statutory guidelines provide for any mediation or other conflict resolution mechanisms. However, the Regional Panel for the WSP for the Lower North Coast, a macro plan, made decisions using a consensus approach, and in early stages of the process an independent facilitator was present (Hamstead et al 2008).

Theme 11: Integration of plans

The process in Category 1 WSPs affirmed a whole-of-government approach. Agency representatives for fisheries, agriculture and conservation sat in significant numbers on water committees to the extent that some other members of the committees thought there was over-representation by government (Spriggs 1999). However it was made clear to committees that agency members were not eligible to vote or make decisions on matters, their role was to explain government policy and provide information (Tan 2003).

All plans including Minister's plans require joint Ministerial sign-off: s 41. Initially the Minister required for sign off was the Minister for the Environment; now the role is played by the Minister for Primary Industries. This in and of itself does not provide for integration of plans.

The macro planning process re-affirms and formalises a multi-agency approach. The major policy document on macro planning provides for input into almost all of the process by Regional Panels (Department of Natural Resources 2006). The process is outlined in Figure 7 above. Regional Panels are comprised of DNR, DEC, and DPI representatives with assistance from CMAs. These multi-agency Panels participate in technical assessment, then formulate recommended rules which go out for targeted consultation. It is unclear from the policy document whether feedback from targeted consultation is considered by the Panels. However in practice, this role is played by the Panels which make changes to the recommended rules before these go out for public exhibition.

9. Comparative analysis and proposals

This report is a companion volume to the literature review carried out for the Collaborative Water Planning project.

Although water planning has been carried out in the three jurisdictions of Northern Australia, namely Western Australia, Northern Territory and Queensland, commentators such as Jackson and O'Leary (2006) have found that in many parts of that region, there is little understanding of the National Water Initiative in general and water planning in particular.

The intention of this report is to provide sufficient background material for a reader to understand the main objectives of national water reform (NWI), the critical role that is assigned to water planning by the NWI, and the legal and policy framework implementing that reform in Northern Australia. Eleven themes are adopted for a comparative analysis between the jurisdictions. They are:

1. Planning objectives that provide for sustainability and adaptive management
2. Provisions for standards and procedures for statutory water planning
3. Provisions that allows for reasonable deadlines
4. Provisions for socio-economic or other analysis
5. Community engagement in gathering and assessing scientific data including the communication of science in water planning
6. Provisions for stakeholder engagement
7. Provisions for indigenous engagement
8. Provisions for transparency in decision-making
9. Provisions clarifying the relationship between planning and political process
10. Guidelines for use of mediation/negotiation/other conflict resolution techniques
11. Integration of water plans with other planning processes including broader natural resource management.

This section of the report draws together findings from the thematic analysis, presents comparisons between the jurisdictions, and where lessons are clear, makes proposals for consideration. .

Theme 1: Planning objectives that provide for (1) sustainability and (2) adaptive management

Many sections of the NWI refer to environmental sustainability. The NWI emphasises that States complete the return of all currently overallocated or overused systems to environmentally sustainable levels of extraction: clause 23(iv). A substantial number of key actions required under the NWI address overallocation. Further, the NWI requires that the water planning framework provides for adaptive management of surface and groundwater systems in order to meet productive, environmental and other public benefit outcomes: clause 25 (iv).

In the judicial interpretation of statutes and policy, statement of objects and management principles play an important role. Where a particular provision is

ambiguous, these statements and principles allow the reader to adopt the interpretation which is consistent with or in support of the objects of the legislation.

This was demonstrated in the cases of the Gwydir Water Sharing Plan and also in the Murrumbidgee Groundwater Water Sharing Plan in NSW. The Court of Appeal in *Nature Conservation Council of NSW Inc v The Minister Administering the Water Management Act 2000* [2005] NSWCA 9 considered the objects and the management principles of the water legislation. It decided that the NSW Parliament was concerned with matters of substance rather than form when it required the establishment of environmental water rules. Having said that, the Court went on to find itself constrained by the rules of administrative law from declaring the Gwydir Water Sharing Plan invalid, although a particular clause in the Plan was found to be inconsistent with legislation. The recent decision of the NSW Court of Appeal in *Minister for Planning v Walker* [2008] NSWCA 224 reinforces the importance of principles of ESD and statement of objects of legislation. These are relevant considerations only if specifically provided for as such in legislation.

In relation to statutory planning objectives –

1. NSW has the clearest provision of statutory planning objectives. It provides for sustainability and recognises the role of the community as a partner with government in resolving issues relating to the management of water. Management principles further these objectives. They refer to adaptive management of the resource, and establish that the highest priority in relation to water sharing must be to protect the water source and its dependent ecosystems.
2. Queensland's water legislation while strongly providing for sustainability, does not expressly refer to adaptive management of water.
3. Queensland and NSW are the only two states that briefly refer to the issue of reversal of degradation in their legislation.
4. NT does not have a statement of objects in its Water Act. There is reference to sustainable use, but not to adaptive management. Allocation and management is to be based on the concept of 'beneficial uses', one of which is the allocation of water to the environment. Adaptive management is not expressly referred to, and while water plans are subject to regular review, there is little provision for monitoring and the feedback of information into the management loop.
5. The current legislation in WA provides for sustainable use of water and protection of ecosystems and the environment. There is no clear reference to adaptive management in the legislation but policy regarding provision of water for the environment affirms the concept as a fundamental tenet of water management.

Gentle and Olzak consider that the most contentious and difficult planning issue was how to 'claw back' entitlements and deal with adjustment assistance (2007, p64). The impasse often leads to a decision to 'leave major reallocation issues for another day' thus preserving the status quo (Gentle and Olzak, p63). In agreeing that ESD has not been implemented despite the clear directive of the NWI, Connell puts it another way – that in water planning much of the debate in overallocated catchments is about the volume of consumptive use that can be clawed back without hurting communities, and not about how much water is required for the sustainable use (2007, p61).

In context of having to clawback licences, the most glaring policy failure was the recognition of 'dozer' and 'sleeper' licences. Under the 1994 CoAG water reform

framework a policy decision was taken to ‘grandfather’⁶² sleepers (i.e. licences which were not used and had no infrastructure developed) and dozers (those that were used from time to time, or had been used at one time) into water entitlements that were capable of being traded. Once that occurred, licence-holders sought to capture those gains, and water trades were mainly in dozers and sleepers. This in turn led to activation of the licences by buyers and an increase in use of water. Activation of sleepers and dozers was anticipated in some quarters, including government agencies, as early as 1992.⁶³ Governments now stand in the position where they need to address that policy failure including the purchase of entitlements in overallocated catchments.

NWI actions require that by 2005 states were to ‘substantially complete addressing overallocation as per National Competition Council (NCC) commitments’, and by the end of 2010 there is to be substantial progress towards adjusting all overallocated and overused systems (NWI, Schedule A). Peter Cullen, a commissioner from the NWC is quoted as saying that it is doubtful whether as at 2006 there are water plans that are NWI compliant (Connell 2007, p61).

Despite the clear statement of objectives in legislation, and detailed management principles that place a priority on sustainability, it can be seen that without the supervision of some higher authority (in this case the NWC), the reality of planning may not deliver on the core objective of sustainability. Appeals to courts on water planning issues are not available on matters of substance or merit (see Queensland and NSW on theme 10). Whether or not a plan has provided a sustainable outcome, or has adequately provided for ecosystem needs, or will indeed deliver on the level of security for water users – all these are matters of substance. Restrictions placed by legislation mean that courts may not look into these matters when exercising their powers of judicial review of water sharing plans. The NSW Gwydir case illustrates this point. Gardner suggests that prospective action may succeed (2006) in the sense that prior to a Minister’s finalisation of a WSP, the Minister may be compelled by an injunction to discharge his or her duty under the Act. Litigation is costly and the public rely on test cases which may not succeed. As more states seek to limit merit appeals to courts, there is a very heavy responsibility placed on the NWC in playing their watchdog role to ensure that the objectives of the NWI are met in substance and in form.

Hamstead and team suggest that ‘development of guidelines for the practical and transparent application of the principles of ESD particularly the precautionary principle in water planning is needed’ (2008, p66).

Adaptive management is even less recognised in legislation and policy in most jurisdictions. Only NSW water legislation has an express reference to that concept. However, legislation is not accompanied by policy guidelines for the monitoring, evaluation and feedback loops usually associated with the implementation of adaptive management. In Queensland there is no express statutory reference to adaptive management of water. However there are clear and progressive policy guidelines which have been formulated by the Department of Natural Resources and Water (DNRM, 2004) which need to be integrated into specific water planning processes.

⁶² See Glossary for an explanation of the term ‘grandfather’.

⁶³ J Pigram et al, *Transferable Water Entitlements in Australia, Report to the Land and Water Resources Research and Development Corporation, Centre for Water Policy Research, Armidale, 1992, 14-15.*

Proposal 1

All jurisdictions should legislate for statement of objectives and management principles that provide for sustainable management in general, and adaptive management in particular.

Proposal 2

Policy guidelines should provide detail on how adaptive management should be integrated into specific water planning processes.

Theme 2: Legislative/policy standards and procedures for water planning

In all of the jurisdictions except for NT there are legislative standards for water planning. In the NT, a process for water planning is available in practice but many aspects of the standards are not defined and water planning is still in early stages. In both the NT and WA, water planning is discretionary. The Minister may choose not to allow for water planning. This has however not been the case.

Water planning is a relatively new 'creature' and pilot projects have taken place in Queensland and NSW. To provide flexibility, many of the procedures are provided in statute but not mandatory. Of the jurisdictions studied Queensland has the clearest statutory provisions in terms of the process of planning. Stage one, called the Water Resource Plan sets broad catchment-wide outcomes including environmental flow objectives and water allocation security objectives where tradeable water allocations are created. Stage two, the Resource Operations Plan, is the implementation of the WRP and may be prepared for all or part of the plan area. It is stage two that converts existing licences into new water allocations.

There are clear legislative standards for water planning in Queensland. How standards are measured remains an issue. Performance indicators are provided only for two particular outcomes – water security and environmental flows. A criticism levied at environmental flows in particular is that without expert hydrological knowledge and information, it cannot be confirmed whether the performance indicators in plans are met.

A related issue, one that repeats the observations made in Theme 1, is whether the standards are satisfied in 'form' rather than in substance. Although outcomes are stated in the plan – they may be phrased in the most general terms. For example, environmental standards set by plans in South Australia and Victoria have been criticised on this point – that environmental flow needs may be expressed 'very simplistically ... and the plan does not seem to quantify them in a way that can be used to assess clearly whether the water needs of a system are met or not'. (National Water Commission 2006, as cited in Gardner and Bowmer 2007 p53).

A full public explanation of how the environmental and resource objectives are intended to be met in a plan will address the above two issues. This may be inserted in an explanatory memorandum to the plan.

Currently, once a plan is finalised, most of the supporting documents including any technical assessments are no longer easily available. Unless an interested member of the community or the public has had access to a printed copy, there is limited access to planning information. It is suggested that planning information remain available on government websites for full accountability.

In his assessment of sustainable extractions, Connell interprets the NWI to mean that the rules applying to decision making and management are to be so transparent that stakeholders know what to expect in a wider range of predictable circumstances, thereby eliminating discretionary decision making previously exercised by agency water managers and government ministers (2007, p61). Elsewhere I have commented on the unconstrained discretion available to decision makers under pre-CoAG legislation (Tan 2000).

Decision makers are now guided by a number of factors but discretionary powers remain available. These aspects of process provide for flexibility but may on the other hand also introduce confusion and uncertainty into planning. For example in NSW and Queensland, the Minister may at his or her discretion appoint a committee to advise on matters important to the community. Terms of reference are set at the Minister's discretion. In Queensland the flexibility of the process allowed the Minister to appoint three separate committees, one the formal CRP, and the other two advisory committees for sections of the Condamine-Balonne catchment. This was to diffuse and manage conflict, and, as the sections of the river had vastly diverse interests, to allow for more representative views to be reflected in the committee's advice. Flexibility of the process was generally commended by the community (Hamstead et al 2008).

In NSW the Minister's discretion extends to abolishing a management committee at any time, whether or not it has completed the task for which it was established. The Minister has the further discretion of bypassing much of the legislative processes by using 'step-in' powers and making a Minister's Plan.

It is also within the Minister's powers to delay the implementation of any finalised plan. In NSW this has occurred in five major inland groundwater areas. Amendments were made to the WSP reflecting a significant change in policy regarding cut back in licences. These amendments did not undergo a consultation process.

Flexibility and discretion in decision making are features of a planning framework where the final decision is made by a Minister. They are attributes that may be used to advantage in delivering beneficial outcomes. The criticism directed against discretion is mainly that it is exercised for reasons extraneous to the intention of the legislature. If Ministers are required to justify why a departure from the usual process was adopted, it will go a long way towards building public confidence in the decision.

For WA and NT, both jurisdictions which are yet to have comprehensive review of their legislative and policy frameworks, legislative and policy standards will need to be complemented by monitoring of the performance of the plans, public reporting, and the systematic review of the implementation process by independent experts. On this last point, NSW's independent expert review of its macro-planning process is much to be commended.

Proposal 3

Performance indicators should be provided for planned outcomes. A full statement of how the environmental and resource objectives are intended to be met in a plan should be made available at the same time as a final plan. This should be publicly available.

Proposal 4

Documents used in planning including any technical assessments should remain available on government websites for full accountability.

Theme 3: Legislative/policy allows for reasonable timelines

The NWI sets targets and timelines for achievement of most 'key actions.' Generally, water plans which need to comply with the requirements of Schedule D of the NWI need to be prepared for all systems by the end of 2009. The target date for systems that are overallocated, fully allocated or approaching full allocation was the end of 2007. Specific implementation schedules are negotiated between the NWC and each of the jurisdictions.

The importance of reasonable timelines is illustrated by the early experience in NSW water management planning. This occurred prior to the NWI, and prior to the introduction of the *Water Management Act 2000* (NSW). In 1997, river management committees were given indicative rules for river management which needed a decision within 6 months. They were also asked to adopt a consensus decision in this matter. The unfamiliarity with the concept of 'consensus' together with the tight timelines led to confusion over the process, angst over the time pressure, delay and expense. Consensus building is supported by international literature as an effective conflict management mechanism in the management of natural resources. However among the other requirements for its effectiveness are reasonable timelines.

Based on that experience, NSW policy makers revised the water planning process in unregulated rivers. The macro planning process is pragmatic, quick, and does not depend on extensive data or resources. However independent expert review shows that even with modifications, it is appropriate only where there is little conflict over water, or where water is not overallocated or overused.

An important issue brought up by Queensland, and this may also be replicated by WA when water planning commences in more catchments – is that human resources may not be available as states go through a 'mining boom'. Associated with this is that expertise in water planning may be in short supply as agencies have traditionally been focused employing those with technical or engineering skills (Hamstead 2008).

A crucial issue relating to NWI targets is that planning, where it involves Indigenous communities, must respect the timeframes of Indigenous peoples. These and other protocols that require recognition of the cultural practices of Indigenous peoples require adjustment of NWI deadlines.

Theme 4: Whether socio-economic or other analysis is required

The NWI provides that socio-economic analysis, community input and the information from best available science are pre-requisites for the settling of trade-offs between competing outcomes. The identification of social values held by stakeholders is presumably a preliminary step in socio-economic analysis, and is discussed under Theme 6. The use of these analyses allows a decision maker to be able to justify the choice between alternative scenarios.

Many of the jurisdictions do not mandate the use of socio-economic or other analysis. It is mandatory in NSW only if a water planning committee is established by the Minister. In all other cases in NSW these reports are discretionary. Queensland's CRP has access to socio-economic analysis at the discretion of the Minister. In WA this issue receives a passing statement in policy, and there is no provision at all for this in NT.

Australia-wide socio-economic assessments, where done, were 'highly variable in quality' (Hamstead et al 2008, p171). Cynical views have been expressed by some stakeholders in Queensland that even where socio-economic reports exist, they are:

- not fully disclosed if contradictory to governmental views;
- subject to manipulation;
- are not properly designed for the task;
- routinely ignore or undervalue non-consumptive or non-market services.

This cynicism resonates with some perceptions in NSW that socio-economic assessment is completed at late stages more for compliance purposes than for input into the decision process (Hamstead et al, 2008). This suggests that the building of trust in the community is a critical factor in the water planning process.

It has been pointed out that technical assessment currently favours biophysical factors (Bowmer et al, 2007). An independent expert review of the NSW macro-planning process points out that analysis needs to be carried out in three parts:

- Understand the present situation;
- Predict the consequences of changed management; and
- Estimate the values associated with those consequences (Bowmer et al 2007).

Not only must the baseline situation be profiled, each alternative scenario of water sharing and the alternative strategies for achieving outcomes should be assessed. The level of cost involved in doing such analysis is an important resourcing issue. It may be argued that the socio-economic aspects of decision-making are just as critical as getting good scientific data. In the absence of reliable bio-physical data, rapid assessment techniques for bio-physical factors have been developed where full sets of data are not available. It may be extremely helpful if similar research is commissioned on developing rapid methods of socio-economic assessment.

Notwithstanding best available science and socio-economic reports, recent assessment of water planning shows that the community questions the robustness of the process by which the decision-maker arrives at a decision. Assessments have shown that the community thinks that recommendations and data go into a 'black-box', and there is little confidence that the decision has given due consideration to all relevant factors.

Proposal 5

It should be a statutory requirement that planning is based on socio-economic assessment, and that decision-makers consider this analysis in coming to a decision.

Proposal 6

Guidelines should state standards for socio-economic assessment in terms of reference, format and community review, and that analysis provide predictions of outcomes arising from alternative water sharing arrangements.

Proposal 7

Assessments should provide assistance for communities to understand potential outcomes arising from alternative water sharing arrangements.

Proposal 8

A report from the decision maker showing how the decision was reached should be

made within 30 days of the decision. This report should show how the decision addresses socio-economic assessment and values identified by the community during the planning process.

Theme 5: Community engagement in gathering and assessing scientific data

It is implicit that NWI-compliant water plans must be based on best available scientific data. It is hard to imagine otherwise. However the regime in NT is yet to provide for this. Strong support for this requirement is found in policy statements in WA and it is an express statutory requirement in Queensland. It is surprising to note that there is no statutory requirement for the best available science to be used in water planning in NSW. Nor does the NSW statute provide for an explicit technical assessment phase for plan making, although policy documents for macro-plans point expressly to this phase.

'Best available science' is a phrase that has yet to be interpreted by the Australian courts in the Natural Resource Management context. Interpretations of 'best available science' exist in other contexts examined by courts, for example, in child support cases,⁶⁴ In New Zealand the *Fisheries Act 1996* requires that the Minister bases his or her decisions on the 'best available information'.⁶⁵ This is a different test, and the arguments in New Zealand have been framed around what constitutes best available information when there was a large amount of information available.

None of the jurisdictions require *new* scientific information to be gathered in order to ascertain the ecological requirements of a particular water system in plan preparation. In the context of forestry management, it has been argued by forest conservation groups that the decision maker should base his or her decision on approval of logging plans on *adequate information*.⁶⁶ The test adopted by the court was that the decision-maker was not expected to gather or assemble information which is not readily accessible. Extrapolating their arguments from legal decisions over the adequacy of environmental impact assessments, Gardner and Bowmer argue that the test will require new research to be undertaken 'if the existing information is not specific enough to understand the likely environmental consequences' (2007 p47). This is an issue which needs to be clarified in policy documents as it is likely that litigation may well be launched to test the boundaries of what is meant by the phrase 'best available science'.

In the NSW macro-planning process it was pointed out by expert reviewers that there is often very limited appropriate regional and local information in peer-reviewed literature (Bowmer et al 2007). In these situations it appears important for local community input in gathering and assessing scientific data. In WA this extends expressly to Indigenous ecological knowledge. There is no guidance in the law or policy as to *how* local and Indigenous knowledge is incorporated in decision-making.

Independent scientific assessment of data is the preferred means of testing of scientific data and it appears that this is done in the majority of plans in Queensland and NSW which had water sharing committees appointed. Direct access to TAPs or to independent scientists by community panels or directly to community in public

⁶⁴ See *TNL & CYT* [2005] FamCA 77 (23 February 2005) and *F & Z* [2005] FMCAfam 394 (11 August 2005) In the context of paternity suits, courts are to be furnished with the best available science which is taken to mean DNA testing.

⁶⁵ *NZ Recreational Fishing Council Inc v Minister Of Fisheries* HC AK CIV-2005-404-4495 [2007] NZHC 189 (21 March 2007)

⁶⁶ *Bridgetown/Greenbushes Friends of the Forest v Executive Director of Department of Conservation and Land Management* (1997) 94 LGERA 380.

meetings has received favourable feedback from agencies, scientists and the community (Hamstead 2008). Open access between scientists and the community sets up mutually meaningful engagement on several levels:

- The community is able to directly ask for clarification regarding matters that are unclear.
- Face to face meetings may help to build a deeper level of trust in scientific information.
- Face to face meetings may also provide for better communication regarding technical and complex matters for communities where literacy may not extend to high school levels.
- Scientists are able to tap directly into local knowledge.

Proposal 9

In compliance with the NWI, best available scientific data must form the basis of water planning. This should be a statutory requirement in all jurisdictions.

Proposal 10

Policy guidelines should provide how the above requirement is implemented, and in what circumstances new information is required to be gathered.

Proposal 11

Stakeholders should have input early in the information gathering and issue setting stage, and this input should form the basis for technical assessment.

Proposal 12

A public report by water agencies should give details as to whether recommendations of scientific reports have been incorporated into the environmental flow objectives of a water plan, and whether and how monitoring suggested by scientists is to be carried out.

Theme 6: Stakeholder engagement

No other principle receives as consistent endorsement as stakeholder engagement in water planning in the NWI. Stakeholder engagement is most often termed as 'consultation' and sometimes as 'community input' by NWI provisions. A broad range of stakeholders are anticipated – those within or downstream of the plan area, affected water users, communities, industry and Indigenous peoples. The processes outlined in the NWI are discussed in Chapter 4.1. Table 2 uses the words

- open and transparent
- accurate and timely
- open and timely
- regular public reports.

There is no intention in the NWI to provide for decision-making by stakeholders. It is clear that stakeholder engagement in water planning is to provide public confidence in reform processes (cl 93, NWI) and openness and transparency in decision-making (cl 25, 93). It appears that at certain *key decision points* in the water planning stakeholders are meant to have a role which is closer to a deliberative than an advisory function. Clause 96 of the NWI gives examples of some key decision points, but this is an area where much more development of policy is required. In Volume 1, Chapter 3.1 of this report the authors found that stakeholder engagement receives

only cursory attention in the content of the NWI compared to other elements such as water markets and trading.

It may be argued that when public benefit outcomes (including social values) need to be identified, the complexity of the task requires more than just the giving of information, and the taking of advice. Based on current formulation of the NWI the following principles may be drawn:

- (1) Consultation of stakeholder groups and the broader community must extend beyond perfunctory and symbolic measures.
- (2) Social values held by stakeholders should be identified in an appropriate manner and fed into socio-economic analysis.
- (3) Where significant decisions are made, alternative options must be canvassed with stakeholders – particularly in relation to reduction of water, sustainability, review of water plans, and identification of environmental and public benefit outcomes.
- (4) Trade-offs require judgements or assessments to be made. These judgements and assessments are to assist the decision maker. The NWI itself does not make clear who the assessors are. It is open to an interpretation that because the ultimate decision is required to be transparent, the assessments are made not just by the decision-maker.
- (5) Information needs to be supplied in a timely manner. What is timely depends on the circumstances and the nature of the information. For instance, it may be reasonable to expect that detailed technical reports should be supplied at least two weeks before they are required to be considered.

Because NWI's provisions on stakeholder engagement are inchoate (in the sense that they are not as fully developed), provisions found in states are highly variable. In Queensland, WA and NSW the role of the community in water planning is one that is expressly recognised in the objects of the water legislation. In the NT there are substantive measures that provide for stakeholder engagement but no statutory recognition of the concept.

It is apparent from the jurisdictional analysis, that measures for stakeholder engagement, and the timelines for provision of critical information are variable. In all jurisdictions most of the provisions are related to furnishing information, and obtaining public feedback on indicative decisions, ie decisions which are proposed.

Reports on which planning is based, eg hydrological reports, and socio-economic assessments if available, are generally available on-line to members of the public. However once a plan is finalised, these reports are withdrawn, and it is difficult then for a member of the public, stakeholder groups, or researchers to form a considered opinion on matters reported. Opportunities for dialogue, and engagement in monitoring of implementation of plans, both necessary components of adaptive management, are lessened.

Public notification of draft plans and the opportunity to make submissions on drafts are mandatory in all jurisdictions.

In all jurisdictions the highest level of stakeholder engagement takes place through advisory committees. In the early days of water reform in NSW, water management committees appointed for inland rivers were charged with making decisions which would then be confirmed by the Minister. Processes were confused and decisions highly contested. Under the Water Management Act 2000 (NSW) these committees were renamed as water sharing committees, and given restricted advisory roles. The next reformulation of planning process in NSW – the macro-planning process – which has been put in place for mainly coastal rivers, has rather more limited formal stakeholder engagement. There is no community committee, and catchment management bodies provide a vehicle for stakeholder engagement. Independent review of the macro-planning process generally rates it as being inappropriate where water is overused or there is a high level of conflict. In addition, stakeholder engagement was seen to be not sufficiently representative in several aspects, particularly for early issue identification.

Measures are designed to provide certainty within the committee process. These include clear terms of reference for committees and administrative support for committee meetings and a report on the community consultation process. An outline of measures appears in the Table 3 below.

Table 3: Provisions relating to advisory committees

Policy/ Statutory measures for advisory committee	Queensland	WA	NT	NSW
Whether mandatory	Yes	Discretionary	Discretionary	Discretionary
Recruitment and membership	Nominations taken, committee to reflect cultural, social and environmental interests	Committee to reflect business in locality, water users, local government, and public authorities	No guidance provided	Interest based representation. Should reside in locality
Terms of reference required	Yes	Yes	Yes	Yes
Vision Planning	-	-	-	Yes, but no feedback as to its efficacy
Guidance as to how to reach recommendations	None	None	None	By consensus
Report on committee's work	Yes	Unclear	Unclear	Yes
Remuneration for committee members	Yes	Unclear	Unclear	Yes

Helpful measures which may be taken to increase stakeholder understanding and promote engagement are identified as:

- An overview report on the issues to be addressed in proposed draft plan (Queensland).
- Public submissions at this pre-draft phase to allow for earlier issue identification (Queensland).
- Workshops run early to inform community what to expect from engagement process (not apparent in any jurisdiction).

- A flexible process that can be adapted for conflict as it arises (Queensland).
- Independent reviews of the process and of issues (NSW, and to a lesser extent Queensland, WA).

In summing up, the ideal of stakeholder engagement is supported by the NWI and statutorily recognised in most jurisdictions. It is seen as critical for creating and maintaining public confidence in water plans and their implementation. Yet there seems to be restraints on its implementation. The NT's efforts in stakeholder engagement are tentative. States have adopted a rather formulaic approach, with engagement occurring mainly through community panels which may or may not be representative of sectoral interests. NSW is seen to be retreating from a high level of engagement in the interests of pragmatism and time management. It is suggested that a lot of work remains to be done to develop a range of mechanisms suitable for adoption in a variety of contexts. National principles along the lines of those developed for provision of water for ecosystems would be helpful in this context (ARMCANZ and ANZECC 2001).

Proposal 13

Principles for stakeholder engagement should be jointly developed by the NWC and all parties to national water reform. This is to provide a common understanding of the term 'stakeholder engagement', clarify the different contexts in which engagement can variously involve information provision all the way to more active deliberation and collaboration at key decision points. Policy-makers should support the formulation and adoption of collaborative and deliberative mechanisms for stakeholder engagement to better provide for transparency in decision-making.

Theme 7: Indigenous engagement and native title

Another principle that receives consistent endorsement is that water management and planning should recognise the interests of Indigenous people and their connection with land and water. The NWI requires that states will provide for Indigenous access to water resources through planning processes that:

- include Indigenous representation in water planning wherever possible;
- incorporate Indigenous social, spiritual and customary objectives into planning and strategies for achieving these objectives wherever they can be developed;
- take account of the possible existence of native title rights to water in the catchment or aquifer area.

The NWI also requires that water allocated to native title holders for traditional cultural purposes be accounted for. This requirement should be seen in the context of Australia's international obligations to recognise Indigenous peoples in natural resource management. The UN *Convention on Biological Diversity* (1992) has been ratified by the Australian Government and it relates to the sustainable use and equitable benefit sharing of biodiversity. Articles 8(j) and 10(c) specifically address the rights of Indigenous people. The phrases 'wherever possible' and 'wherever they can be developed' in the NWI statements should not be taken as mere discretionary if strong commitment for Indigenous engagement is found in State policy and legislation. In this context the given phrases should be taken to refer to measures that are capable of happening, or having the potential to be developed.

The NWI requires that the *potential or possibility* of native title be considered in planning and to take account of water allocated to native title holders for traditional cultural purposes: para 54. Resolution of native title claims takes many years. Jurisdictions should not wait for native title to be proved in catchments before providing adequate opportunity for cultural benefits to be identified and considered in an open and transparent way.

This was the basis for NSW's approach – that native title rights may increase during the life of the WSPs, and that there should be provision of water for the satisfaction of these rights (Hamstead 2007,p172). However in almost every WSP in NSW for inland rivers, native title rights are currently allocated no water which a note that increase in use of native title rights may occur as a result of the granting of native title under the *Native Title Act* 1993 (Cth).

A range of measures have recently been adopted in NSW macro-plans for unregulated rivers where competition for water is less intense. These range from measures of low impact such as native title rights (which correlate to rights already existing under native title legislation) to measures which may in time prove useful, such as Aboriginal commercial licences. Perhaps the most innovative measure is the Aboriginal Water Trust for new businesses to purchase water. The Trust has \$5 million start up funds.

Principles and protocols for Indigenous engagement in planning processes are enhanced by the Boonmanulla statement in NSW. It would be appropriate for other States to develop and, more importantly, implement similar protocols for Indigenous engagement in water planning.⁶⁷

Provisions for Indigenous water reserves have been made in Queensland, in WRPs, in the Gulf and Mitchell at the end of 2007. These are set aside for helping Indigenous communities in the Cape York Peninsula Region to achieve their economic and social aspirations. The total of the annual volumetric limits for all water licences to take unallocated water to be held as Indigenous reserve from the Cape York Peninsula Region is 5000 ML which represents about 0.1% of water available in the 'general unallocated water' for future development. A similar provision appears in the Gulf WRP for the rivers in Cape York. These measures point to the success of a multi-party negotiated agreement in the Cape which a decade later was affirmed by the Queensland Government. Despite owing their existence to political and not water planning processes, and the conservative amounts allocated, these reserves show that much more can be done to give credence to the NWI requirement of providing for Indigenous water needs.

Ad-hoc measures have been adopted in Queensland for undertaking Indigenous engagement including setting up Indigenous working groups in several catchments. It is suggested that an evaluation be carried out of these measures.

Western Australia, Northern Territory and Queensland show commitment to engaging with Indigenous people with varying degrees of success. In the policy arena, WA has perhaps the strongest articulation of general policy in relation to

⁶⁷ For example the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) is a confederation of traditional owner groups from along the Murray River. MLDRIN have negotiated a Memorandum of Understanding (MoU) with the Murray Darling Basin Ministerial Council, signed in March 2006 at Albury. The MoU recognises the shared responsibilities of the MDBC and traditional owners in caring for land and water and provides a pathway for partnership.

Indigenous engagement developed in 2001. Through the WA Implementation Plan for the NWI, further commitments are found for the inclusion of Indigenous ecological knowledge in making appropriate water allocations for the environment. Yet in all these states there are no details on how these commitments will be implemented. It is clear that there are numerous research gaps in the implementation of policy in this area, a finding that finds support in the literature review in Volume 1 of this report (see chapter 4.2).

Besides NSW, it cannot be observed that there are consistent strategies for incorporating Indigenous social, spiritual and customary needs into water planning. Where these strategies exist, it should also be made clear how they are to be implemented. In NSW, a recent report referred to the Boonmanulla statement, and recommended its implementation in macro-planning (Bowmer et al 2007).

Proposal 14

Jurisdictions in Northern Australia should develop and implement principles and protocols for Indigenous engagement in water planning including monitoring performance against policy objectives.

Proposal 15

Policy should be developed at the federal level to consider how access to water by Indigenous communities can be protected. This extends to a review of how cultural water requirements may be accommodated in jurisdictions; and commercial access encouraged.

Themes 8 and 9: Transparency in decision-making, and clarity in the relationship between planning and the political process.

The NWI requires that decisions in planning are open and transparent. Thus theme 8 considers two questions – (1) the lowest minimum standard of transparency, which is whether there is a requirement that planning information is available to the public and (2) whether provisions allow for clarity in the making of trade-offs between competing interests.

Theme 9 considers whether (1) the legal and policy framework clearly identifies who the decision maker/s of the plan should be, and (2) the extent to which the plans are binding on the state. Although analysis of both themes has been separately carried out, the conclusions drawn are inter-related and will be dealt with collectively.

In NSW and NT, water plans are ultimately subject to political decisions made by the relevant Minister. Under existing WA legislation, the finalisation of a statutory water plan is both an administrative and political decision. In Queensland, the water resource plan is subject to a political decision, whereas the resource operation plan is subject to an administrative decision.⁶⁸ This much is clear in the legislation itself.

Communication of this position to the public was not particularly successful in the early phase of water planning in NSW which was finalised in 2004. Planning had started in 1997-98 for river management. River management committees were set up to make draft river management plans. There were no statutory processes in place at that time. With the commencement of the *Water Management Act 2000 (NSW)* (WMA) these ad-hoc processes rolled into formal statutory processes, and some of these committees were reconstituted as water management committees. In that era there was a significant policy void, and members of those two types of committees and the general community were confused and angry when the Minister used his step-in powers under s 50 of the WMA to make a plan. With the Court of Appeal decision in the *Lower Murrumbidgee* case (see chapter 8.3 of this report) it is now clear that that the Minister may use his or her step-in powers at any time, bypassing any draft from committees whose role is now clarified as being merely advisory. More recent policy documents in that state for macro-planning clarify that the steps in the process led to a recommended plan which is forwarded for the Minister's decision. Macro plans are in effect Minister's plans made under s 50.

The NSW experience is a salutary lesson for other states, where policy documents have emphasised that the decision-maker on plans is the Minister.

⁶⁸ Where it is an administrative decision, the government agency is the decision-maker.

The NWI's emphasis on technical assessments and socio-economic analysis are attempts to provide a sound basis for decisions. Where these are undertaken, all jurisdictions currently provide for the reports to be made publicly available. Satisfaction of this requirement in and of itself does not mean that decisions are transparent. Transparency in decision-making processes is a concept which is relatively new to the management of water, where decisions have long been the domain of administrators as experts. Previous generations of water and environmental legislation have conferred broad discretionary powers on administrators and decision-making particularly around election times featured political interference at high levels (Tan 2000, Tan 2001, Grant and Papadikis 2004). Where decision makers have broad discretion in weighing up competing interests in land planning matters, there is a persuasive argument that a structural bias can exist in favour of development proposals (Farrier et al 2007). It may be argued that this is no different for water planning. Thus the NWI requirement of transparency intends to curtail discretion, prevent narrowly-based decisions for short term political benefits, and prevent bias in favour of development.

How to best provide for transparency in decision making remains a continuing challenge in all states. The position varies across the field. At the extreme end of the range are NT policy and legislative processes which do not provide for transparency. All of the other jurisdictions are clumped around the middle of the range, where there is a desultory effort to provide for transparency. It is a major issue in overallocated catchments, and discussed in theme 1.

Legislative provisions to support transparency in decision making fall into four main categories:

- a decision maker is to act according to management principles (for example NSW);
- a deliberative duty for the decision maker is to consider a list of matters as relevant considerations under legislation (for example Queensland);
- the process allows for an element of public participation including public notice, submissions etc (all jurisdictions);
- reporting requirements as to how the decision maker has considered these submissions (NSW, Queensland, WA);
- public availability of reports (NSW, Queensland, WA).

The imposition of a deliberative duty on the decision-maker to consider a list of matters is a common feature of environmental and natural resource legislation (Bates 2006, Fisher 2003). In Queensland the list extends to 17 matters (see Chapter 5.3, Theme 8 of this volume), without any guidance as to how the Minister as decision maker is to weigh the matters. It is unclear how the Minister is to resolve tensions which may result from having (1) advice from a community reference panel which is unclear or may be internally conflicting; or (2) may contradict the technical assessments; or (3) which may further be complicated by the possible effects of the draft plan on water not covered by the plan; and (4) may include matters on which a large number of public submissions have been made. Although the deliberative duty does constrain decision making, the application of the principles of administrative law means that it is only in rare circumstances that decisions are set aside on the grounds of failure to properly carry out a deliberative duty.

It is suggested that other legal provisions e.g. a reporting on the consultation process, preparing a summary of all submissions made, are not adequate to provide for transparency in the Minister's own decision. The law is a blunt instrument in this area.

It is further suggested that to achieve transparency it is appropriate to rely on policy which is capable of responding more readily to public demands, or to research outcomes, and which can be better tailored for different circumstances. Policy documents could provide for better public involvement in assessment of options, and the use of decision support systems (Hamstead et al 2008, also Bowmer et al 2007).⁶⁹ Continued development of multi-criteria analysis tools is needed to bring together the myriad of factors needing to be considered.⁷⁰ In addition to the traditional environmental and economic impacts, these should address such things as procedural and distributional fairness, community well-being and effect on social values (Hamstead et al, 2008, p171).

Just as important as transparency of decision making is the longevity of plans, and whether they are binding. The NWI's requirement that water plans be statutory is intended to ensure that governments are bound by their own plans, and that processes laid down are followed. In all jurisdictions water planning is a statutory requirement, with the exception of WA where new legislation will be providing for this. Statutory water plans are not immune from being overridden by other legislation, or amended. If this should happen outside of the statutory review period, provision for compensation protects the interests of holders of private water entitlements. There is no equivalent protection for environmental water allocations, or for any public benefits identified in the plans.

Theme 10: Guidelines for use of mediation and other conflict resolution techniques

Policy makers in most jurisdictions have attempted to keep litigation over water planning out of the court's jurisdiction in relation to substantive matters, and making available only judicial review of the Minister's decision. The exception is the NT where it appears that the legislation leaves it open for any person to challenge the validity of a WAP either on its merits or on judicial review. In the judicial review of the Minister's decision in making a water allocation plan, courts apply administrative law principles on highly technical and complex issues.

There are several reasons why limiting access to the Courts is justified, including:

- (1) a legal challenge that succeeds in overturning a finalised plan will mean that the agency will have to go back to the drawing board, delaying implementation of measures, with significant cost implications;
- (2) the possibility of having plans overturned means that those issued entitlements have limited security, and will affect the water market and business plans;
- (3) planning involves the conciliation of competing interests, and the management of complex scientific information and courts are often not the appropriate forum to manage this;
- (4) in many jurisdictions plans are statutory instruments. An un-elected appeal body has no legitimacy to second-guess a political decision on plan adoption, and current judicial review is adequate to challenge the legal certainty of a plan's meaning.

⁶⁹ See Glossary for an explanation of decision support system.

⁷⁰ See Glossary for an explanation of multi-criteria analysis.

However a lack of ability to have a higher dispute resolution body consider the merits of any water planning decisions has several implications on at least two levels. At the broader public level, it means that water plans (which in some cases may be completely inoperable if the literal meaning of some clauses is adopted) cannot be successfully challenged, and can only be changed by political means. This was the situation in the *Lower Murrumbidgee* case in NSW (see Chapter 8.3 Theme 9 of this report). It will be difficult to expect any level of community support for such a plan. Even more community disquiet will be engendered by water plans which may not comply with management principles, or may fail to properly fulfil the objectives of the legislation. This occurred in the *Gwydir River* case in NSW.

A lack of public support for water plans may have played a part in the NSW Minister's actions over five major inland groundwater water sharing plans. These were held in abeyance for four years. In that time the policy on cut-back in use which underpinned these plans was reversed, and plans were amended to reflect the new policy. A reversal in policy of this magnitude seldom occurs, and, it is suggested, highlights a lack of consideration regarding the socio-economic impacts of the initial policy decision. It also highlights that not providing an avenue for the consideration of the merits of a plan is a systemic flaw in the water planning process.

At the individual level, persons aggrieved by planning require their grievances addressed. Two mechanisms have been provided:

- A high level review panel is a statutory measure in the NT. The Panel has the broad power to review matters of substance. There is also potential for the Panel to be an important conflict resolution mechanism in water planning as argued earlier. Despite the obvious merits of this mechanism, no Panel has as yet been established in the NT.
- Referral members are appointed by the Minister in Queensland in relation to resolution of grievances arising from the imposition of a moratorium on water-related activities at the start of the water planning process or from the Resource Operations Planning process.

Few policy guidelines exist across the jurisdictions for mediation in disputes, or the use of conflict resolution mechanisms in water planning. Given that ability for parties to take disputes for judicial resolution has been limited, it would be reasonable to see development of more alternative dispute resolution mechanisms (ADR) in this area. In stark contrast with research, knowledge and practice of ADR in private and commercial disputes, environmental or public dispute resolution is in its early phases in Australia; and it is a research gap which needs addressing.

Where policy does exist for conflict resolution mechanisms, it appears to be underdeveloped. For example in WA, Statewide Policy No 12 deals with mediation between parties in a limited range of matters, none of which relate to water planning. In NSW, where two mechanisms have been adopted in water planning, that is, reaching agreement by consensus and visioning, (or goal setting), there are no well developed policy guidelines publicly available explaining the objectives intended to be achieved, how the mechanisms achieve the objectives, and the challenges that may lie in the way. There is also little evidence of training of staff to acquire new skills. Criticism of the implementation of the consensus process in NSW in the earlier phases of water reform has not resulted in clearer enunciation of this in the recent macro-planning process. This is not to be construed as criticism of consensus

building as a conflict resolution or deliberative decision-making mechanism, but rather a comment on how its implementation could be much improved.

Proposal 16

Where conflict resolution mechanisms have been adopted in water planning processes, clear guidelines should be made publicly available to notify what the mechanisms are meant to achieve and how they operate.

Proposal 17

Training in conflict resolution mechanisms should be provided to agency staff.

Theme 11: Integration of plans

The NWI requires water planning to have reference to broader, regional natural-resource management planning processes. This theme considers whether legislation and policy documents provide for multi-agency participation in processes leading to integration of various types of plans related to water; and whether water planning itself relates to land use plans and NRM plans.

Best practice in most jurisdictions involves agencies comprising agriculture and environment (Queensland, NSW) being represented in water planning committees. In NSW the role of agencies on these committees is clearer than other jurisdictions. For example in the macro-planning process, these multi-agency panels participate in technical assessment and formulate recommended water sharing rules. This is in accordance with a ‘whole-of-government’ approach.

The clearest provision for integration is found in current WA legislation. At a regional level, a management plan *must* provide for integration of water and land use planning and management.

Strategic mapping at best should not only provide for water management within a landscape context, – it should also have the potential of providing for urban, peri-urban⁷¹ and industrial water supply and development; natural resources issues such as riparian management, riverine structures, fish species, and native vegetation; water quality issues; and should take into account cumulative impacts on biological diversity. This perhaps is the intention of state level strategic plans, and these plans do provide for an overview of state water use and development. Integration however needs to occur at a catchment or regional level, and the WA model has much to commend.

This level of coordination is not yet available in all jurisdictions, despite the discourse of integrated land and water management planning. It is an ideal of planning that requires not only legislative and policy changes, but structural and cultural changes to agencies. Exploration of these issues requires research, regulatory and institutional design, and resources.

⁷¹ See Glossary for an explanation of peri-urban.

10. Conclusion

Water law can be seen as a fascinating reflection of history, as well as a society's culture and its relationship with nature (Wescoat 2005). An examination of the various legal regimes that have existed in Australia resonates with this observation. The Indigenous regime recognised spiritual, economic and communal rights to water, while the common law regime recognised that an individual's water use affected others and thus placed limitations on use. The regulatory regime imposed prior to federation was focused mostly on supplying the needs of irrigation; in that era irrigation was the foremost concern of the State. Other concerns have recently eroded irrigation's hold over water policy. Sustainable management of water and the establishment of markets for water now share foremost priority in water policy and law.

Australian policy-makers and legislatures have been able to work together for reform in ways that other countries have not been able to do. Underpinning the willingness to undertake reform is the recognition that this is a country that is wet *and* dry, that droughts and flooding rains occur in ways that are hard to predict; water has shaped our ecological systems, our irrigation systems need expensive maintenance, and our human actions have had great adverse impact on water and ecology. Economic, environmental, political, ideological and pragmatic forces built up a momentum that led to nation-wide reform in the mid 1990s to early 2000.

The National Water Initiative is now the pre-eminent statement of national water policy. Water planning has been assigned the thorny task of resolving tensions inherent in achieving a nationally compatible trading system and environmental sustainability, while maintaining social values. Water planning is not new; however in the past it adopted a technical approach, that is, planning for infrastructure (Sewell et al 1985, United Nations Department of Economic and Social Affairs 1974).

Assessments of water reform progress carried out by the National Water Commission, and before that the Productivity Commission, tell us that agencies in all jurisdictions have yet to adequately meet the challenge of water planning. On the substantive level, water plans have not met NWI standards of sustainability; over allocation remains a pressing concern. Matters of process have also been identified as a concern by the NWC and others (Gardner and Bowmer 2007, Hamstead et al 2008) particularly the engagement of Indigenous people in planning, and the transparency of decision-making.

Slow progress in water planning may partially be explained by the difficulties experienced by agencies realignment of strategies, priorities and skills. What is needed for improved water planning? The following have been identified:

- the involvement of a wider range of disciplines in water management;
- an adaptive or a resilient approach that provides for periodic or cyclic reviews every five years or earlier;
- the use of economic analysis in planning;
- a commitment to incorporate more thorough assessments of the social impact into water planning;
- the need to consult among agencies to align and integrate land and water planning;
- the importance of making it possible for minority groups (notably Indigenous peoples) to participate in an informed and meaningful way; and

- a general need for increased public involvement.

The last point requires elaboration – public involvement encourages the search for options, particularly in relation to environmental concerns; extensive consultation should occur especially at draft plan stage; measures to involve the public need to be explored and there should be forums for dialogue and rational evaluation of different goals. Techniques used have been fairly traditional, even though there are a wide range of possible methods. ‘Typically a planning agency will focus on one or two, often the quickest and least expensive’ (Sewell, 1983, Sewell et al 1985 p 245).

The above suggestions for improving water planning are not new. Professor Derrick Sewell, an international expert on water planning, made these statements as far back as 1985, drawing from a workshop contributed to by senior Australian water administrators. It is a sad indictment of those responsible for carrying out the task of reform that over twenty years after Professor Sewell’s assessment of what was needed, these comments largely still apply to the current situation. This report finds eight major contemporary areas for improvement in collaborative processes in water planning.

Collaborative governance is a central reality of public problem solving for the foreseeable future. The change in the regulatory framework for water should be seen in this context of the ‘profound change in the direction of environmental regulation and policy both within Australia and internationally’. This change has been acknowledged implicitly in the NWI, but as analysis earlier in this report and in Chapter 3.1.1 Volume One shows, the attention given to public participation is relatively shallow compared to that received by other issues, for example water markets and trading. Thus the first area for improvement in the implementation of collaborative water governance is that as yet the language and thinking of the NWI and of state policies on the subject is imprecise and inchoate. It would be helpful for all jurisdictions to adopt a common statement of principles relating to collaboration, outlining what it means, the objectives that collaboration is to achieve, and what levels of collaboration are required in different circumstances.

While there are several subsets of regulatory models in the literature ranging from responsive regulation (Ayres and Braithwaite 1992), smart regulation (Gunningham and Grabowsky 1998), to facilitative regulation (see Stewart 2002), nearly all recognise the importance of deliberative participatory processes for securing regulatory objectives. There is lack of reference to or requirement of deliberative participatory procedures within the Australian water policy and law. The second area of improvement is that regulatory design in water planning requires improvement in this regard. In all jurisdictions except for the NT, the objectives of water legislation acknowledge the role of the community in water planning. Beyond an inclusion in management principles calling for deliberative measures in decision making, it is not usually expected for legal frameworks to provide for this. Besides the formation of advisory committees, and the usual provisions allowing for information and submissions, the legislation does not clarify how the community’s input is to be achieved, let alone how deliberative participation is to be carried out. This lack of detail on collaboration may allow for flexibility of the process, but where policy is underdeveloped, it often means that cost-cutting measures and short cuts are taken.

The third area for improvement has been frequently noted. In the context of this report on water planning, improved transparency supports collaboration. The NWI emphasises technical assessments and socio-economic analysis as important in providing a sound basis for decision-making. Where these are undertaken, all

jurisdictions currently provide for reports to be made publicly available. Satisfaction of this requirement in and of itself does not mean that decisions are transparent. Transparency in decision-making processes is a concept which is relatively new to the management of water, where decisions have long been the domain of administrators as experts. How best to provide for transparency in decision making remains a continuing challenge throughout Australia. The position varies across the jurisdictions of interest to this analysis.

Decision makers are now guided by a number of principles or objectives laid down in legislation but discretionary powers remain available. These discretionary aspects of the process provide for flexibility but may also introduce confusion and uncertainty into planning. Flexibility and discretion in decision making are features in a planning framework where, in the current era, final decisions are made by a Minister. Requiring ministers to justify a departure from the usual process, or the making of a decision that contradicts the aspirations of a community panel or technical (including socio-economic) assessments may contribute towards promoting public confidence in decision-makers.

Fourthly, decisions are need to be based on accurate information and analysis. Despite NWI provisions, requirements for technical assessment and their standards vary greatly across jurisdictions. The NWI provides that socio-economic analysis, community input and information from the best available science are pre-requisites for the settling of trade-offs between competing water uses. Gathering of base-line data for constructing the water-use profile of the planned area, understanding biophysical, social and economic conditions of the catchments and identifying community issues as they relate to water resource management are first steps in socio-economic analysis. The next step involves generating and evaluating options based on the above and assessing effects of changes arising from water use decisions. The use of these analyses enables decision makers to justify choices made between alternative scenarios.

Many of the jurisdictions do not mandate the use of socio-economic or other analysis. A recent national study of water planning found that if carried out at all, socio-economic assessments were highly variable in quality (Hamstead et al 2008). This study further showed that the community has little confidence that the decision has given due consideration to all relevant factors and analyses.

Fifthly, how plans are written also needs to be improved. As mentioned earlier, Chief Justice McLellan of the NSW Land and Environment Court remarked on how regrettable it was that plans were written in such a complex way that anyone seeking to understand them had an extraordinary difficult task; moreover that if the literal meaning of some clauses were adopted, the plan could not operate. As a related point, plans often contain terms that are broad, imprecise or subjective; and performance indicators, even if present, may be so generalised that it is difficult to ascertain whether the indicators have been achieved. Specifically in relation to performance indicators of environmental flows, it is almost impossible to understand agency reporting on data without expert hydrological information and knowledge. 'Outcomes' stated in plans are also frequently not measurable, for example, the outcome of meeting Indigenous needs for water. Several suggestions have been given in this report as to how accountability of indicators may be improved.

The sixth area for improvement is that Indigenous interests are not adequately provided for in planning practice. Part of the reason for this is that NWI provisions are attempting to steer a difficult course between the strict legal requirements of native title, and the wider approach that Indigenous social, spiritual and customary objectives have intrinsic value and should be considered in planning. It is no surprise to most readers that the law on native title fails to address the contemporary needs of Indigenous people. This was the main finding of a recent report by the Human Rights and Equal Opportunity Commission in 2008. The crushing evidentiary burden required to prove native title can provide very few avenues for access to water by Indigenous communities. Negotiated outcomes for native title are preferable, but recommendations to reform the Native Act 1994 (Cth) to ease this process is beyond the scope of this report. Even though there is strong commitment for Indigenous engagement in some high level policy statements, in most jurisdictions there is shortfall between the policy and its implementation. Ad-hoc measures have been taken, but well-thought out comprehensive strategies are yet to be developed. Current government policy is limited in its scope according to many Indigenous groups who claim an inherent right to access water for commercial purposes. This is a critical issue in Northern Australia given that Indigenous communities form a significant proportion of the population in some catchments. For different reasons this is also an issue for southern states, where water may be almost fully-committed to non-Indigenous uses with extremely adverse effects on Indigenous livelihoods.

Conflict over water plans occurs in jurisdictions where there is strong competition over the resource. International literature on this point suggests that cooperation over water is more common than conflict, particularly for trans-boundary water resources. Where the stakes are high, there are more reasons to find creative solutions – ‘positive-sum, integrative allocations of joint gains’ (Wolf 2005, p132). Historically, cooperation typically prevails over conflict where resources cross national political boundaries, although there are some notable exceptions. We see this in Australia in the recent National Water Plan. Conflict on a smaller scale may not so easily produce the integrative allocations of joint gains that Wolf refers to, and conflict may need to be managed rather than resolved. There are several techniques currently adopted for conflict management in water resources, for example, facilitation. Yet it is apparent that few of the jurisdictions have developed policy that benefits from existing knowledge on a system-design approach to consensus building. This is the seventh area for improvement identified in this report.

Finally this report notes that despite the funding provided by the National Water Commission to develop policy-making and support water planning in various jurisdictions, there is a general deficiency in resourcing collaborative efforts in water planning. The two most recent formulations of national policy, the Howard government’s National Plan for Water Security and the Rudd government’s National Plan for Water, have allocated vast sums of money on capital works for modernising irrigation systems and other matters directly affecting consumptive use. Although no definite provisions are as yet available, it appears that despite the NWI identifying water plans as the key mechanism for delivery of national water reforms, there is limited support of the water planning efforts made in the states, in comparison with the very significant support given to infrastructure building in the Murray-Darling Basin.

Discussion in this report has not focussed on enforcement of the NWI. However it is worthwhile noting that while carrots are more important than sticks, there are no effective penalties or enforcement of NWI key actions and timelines.

Notwithstanding this critical assessment of the law and policy in water planning, it needs to be acknowledged that Australian states are at the forefront of planning for allocation and management of water by international standards. Our water managers made decisions which resulted in poor ecological health in rivers. Our political leaders made decisions to supply subsidised water for social policies which are now abandoned. Collectively we have in the past ignored the rights and needs of Indigenous people in relation to land and water. That has been this country's historical legacy. However few countries in the world have had this opportunity to address past mistakes, and to reverse such policies. The lessons that Australians are learning from our efforts at water reform are being shared with others around the world (Kenney 2005). If Australians are to do better at water reform in this era of uncertainty, there must be public confidence in reform measures. For this reason alone, collaborative water planning needs the full support of governments.

Appendix 1: Summary of findings

Theme	Qld	WA	NT	NSW
1. Planning objectives	Yes	Yes	No	Yes
2. Standards and procedures	Yes, but general policy document needed	Unclear	Discretionary	High element of discretion. Policy document for macro-plans is clear
3. Timelines	Most catchments have WRP in place, with ROPs underway in others	Planning underway, new legislation required	Legislation to be extensively reviewed, planning for some areas underway	Tight timelines. WSPs for almost all water sources
4. Socio-economic analysis	Discretionary	Passing statement in policy	Not provided	Mandatory in some circumstances
5. Scientific data	Legislative requirement, TAPs discretionary	Strong statement in policy	Not provided	Patchy record, early processes included Independent scientist on committee
6. Stakeholder engagement	Inform/consult Committee mandatory	Inform/consult Committee discretionary	Inform/consult Committee discretionary	Highly variable From deliberative to information provision, Committee discretionary
7. Indigenous engagement	Indigenous water reserves in two catchments, otherwise, ad hoc special measures available	High level policy and Indigenous Advisory Committee, no other special measures	No specific provisions but committees attempt to provide appropriate engagement	New innovative measures yet to be tested
8. Transparency in decision making	Attempts made but largely not transparent	Attempts made	Not provided	Attempts made but largely not transparent
9. Planning/ political process	Final WRP is a political decision. A final ROP is an administrative decision. May be over-ridden by State Development agency.	Final plan is administrative /political.	Final plan is political	Community confused in first round of water planning. Final plan is political.
10. Conflict resolution	Referral panel for moratorium and ROP	Yes	High Level Review Panel not established	Questionable success of consensus building
11. Integration of plans	Not explicit	Process in place	Not provided	Multi-agency process

Appendix 2: Key Actions, Schedule A, NWI

Key Actions	Date for implementation	NWI paragraphs	Responsibility
<i>Water access entitlements and planning framework</i>			
<ul style="list-style-type: none"> ▪ Implementation of the framework: <ul style="list-style-type: none"> - substantial completion of plans to address any existing overallocation for all river systems and groundwater resources in accordance with commitments under the 1994 COAG water reform framework - Legislative and administrative regimes amended to incorporate the elements of the entitlements and allocation framework in this Agreement 	end 2005	26(ii)	States
	end 2006		States
<ul style="list-style-type: none"> ▪ Water access entitlements to be defined and implemented 	immediate	28-34	States
<ul style="list-style-type: none"> ▪ Water to meet environmental and other public benefit outcomes identified in water plans to be defined, provided and managed. 	immediate	35	States
<ul style="list-style-type: none"> ▪ Water plans to be prepared along the lines of the characteristics and components at Schedule D based on the following priorities: <ul style="list-style-type: none"> - plans for systems that are overallocated, fully allocated or approaching full allocation; - plans for systems that are not yet approaching full allocation 	end 2007	39-40	States
	end 2009	39-40	States
<ul style="list-style-type: none"> ▪ Substantially complete addressing overallocation as per NCC commitments. ▪ substantial progress toward adjusting all <i>overallocated</i> and/or <i>overused</i> systems 	2005	41	States
	end 2010	43 - 45	All Parties
<ul style="list-style-type: none"> ▪ Water plans to address indigenous water issues 	immediate	52 - 54	States
<i>Community partnerships and adjustment</i>			
<ul style="list-style-type: none"> ▪ Open and timely consultation with all relevant stakeholders in relation to: pathways for returning overallocated systems to sustainable extraction levels, periodic review of water plans, and other significant decisions affecting the security of water access entitlements. 	ongoing	95	States
<ul style="list-style-type: none"> ▪ Provision of accurate and timely information to all relevant stakeholders in relation to the progress of water plan implementation and other issues relevant to the security of water access entitlements. 	ongoing	96	States

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GLOSSARY

Adaptive Management	An approach that recognises natural systems are complex and dynamic. As our understanding of catchment processes is often limited, periodic reviews of management actions are required. Feedback from reviews is used to improve the next stage of management.
Algal bloom	Rapid growth of algae in surface waters due to an increase in nutrients such as nitrogen and phosphorus and availability of light.
Allocation	Water users hold a legal entitlement, or licence, to a share of the available water. An allocation is the specific volume of water made available to the holder of an entitlement in a given season. Allocations in each water system are set by the managing authority at intervals throughout the irrigation season after assessment of the available water resources.
Aquifer	An underground layer of soil, rock or gravel able to hold and transmit water.
Beneficial use of water	A term in the Northern Territory to refer agriculture, aquaculture, and for maintaining the health of aquatic ecosystems.
Biodiversity	The variety of life forms, plants, animals and micro-organisms; the genes they contain; the ecosystems they form; and ecosystem processes.
Bulk entitlement	The right to water held by water and other authorities defined in the <i>Water Act 1989</i> (Vic). The bulk entitlement defines the amount of water from a river or storage to which an authority is entitled, and may include the rate at which it may be taken and the reliability of the entitlement.
Bulk entitlement conversion order	The statutory instrument used to issue the bulk entitlement under the provisions in the <i>Water Act 1989</i> (Vic).
Cap	An upper limit for the volume of water available for use from a waterway, catchment, basin or aquifer.
Catchment	The area of land drained by a river and its tributaries.
Catchment management	Statutory bodies established under state legislation.

authorities (CMAs):	They have responsibilities that may include river health, regional and catchment planning and coordination, and waterway, floodplain, salinity and water quality management.
CoAG	The Council of Australian Governments is the peak intergovernmental forum in Australia. It comprises the Prime Minister, State Premiers, Chief Ministers of the two Territories, and the President of the Australian Local Government Association.
Collaboration	Means people working actively together. A 'ladder of citizen participation' is frequently used to classify the various forms of public participation. Specific modes of participation are suitable for different objectives, but there is not a commonly accepted set of terms. A fuller discussion is given in Volume 1, chapter 3.1.2.
Consumptive pool	The amount of water resource that can be made available for <i>consumptive use</i> in a given water system under the rules of the relevant water plan.
Consumptive use	Water that is used by other than natural processes by human beings and not returned to streams or groundwater. This includes water used in farm irrigation, industry, urban and stock and domestic use.
Critical human needs	This concept refers to the 'minimum amount of water that can only reasonably be provided to meet (a) core human consumption requirements in urban and rural areas; and (b) those non-human consumption requirements that a failure to meet would cause prohibitively high social, economic or national security costs'.
Dam	A structure built across a drainage system to store surface water flow. It may refer to both small and large structures.
Decision support system	A tool which helps to synthesise information and make it more readily understandable for decision-making. It may or may not be computer based, and is particularly useful in natural resource management where many differing factors (also called variables) need to be considered.
Diversion	Water extracted for use from waterways (including storages) by means of pumping or gravity channels.
Due diligence assessment	Due diligence means to take appropriate care. The level of care depends on the context in which an assessment is required. Assessments are often the first step taken to

consider risk in environmental or development or health and safety contexts.

Environmental and other public benefit outcomes	<p>Environmental and other public benefit outcomes are defined as part of the water planning process, are specified in water plans and may include a number of aspects, including:</p> <ul style="list-style-type: none">– <i>environmental outcomes</i>: maintaining ecosystem function (eg. through periodic inundation of floodplain wetlands); biodiversity, water quality; river health targets;– <i>other public benefits</i>: mitigating pollution, public health (eg. limiting noxious algal blooms), indigenous and cultural values, recreation, fisheries, tourism, navigation and amenity values.
Ecologically sustainable	<p>Activities that meet present needs without compromising the ability to meet future needs because of damage to the environment. The National Strategy for Ecologically Sustainable Development defines ecologically sustainable development as 'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'. There are various versions of definitions in federal and state legislation.</p>
Entitlements	<p>Used in the context of 'water access entitlement' refers to an right to access to a share of water from a specified 'consumptive pool' as defined in a 'water plan'.</p>
Environmental allocation	<p>An amount of water allocated for the ecological needs of a given area eg a wetland or forest.</p>
Environmental flow	<p>Any river flow pattern provided with the intention of maintaining or improving river health.</p>
Environmentally sustainable level of extraction	<p>The level of water extraction from a particular system which, if exceeded would compromise key environmental assets, or ecosystem functions and the productive base of the resource.</p>
Environmental water requirements	<p>Descriptions of flow regimes (e.g. volume, timing, seasonality, duration) that are needed to sustain the ecological values of aquatic ecosystems and aquifers, including the processes and biological diversity, and that are designed to provide environmental outcomes.</p>

Environmental water provisions	Water that is provided through water plans to meet (in part or in full) the environmental water requirements.
Extinguishment of native title	To bring rights and obligations to an end. The High Court in the Mabo decision declared that a 'clear and plain intention' to extinguish must be found. Amendments to <i>Native Title Act</i> 1993 (Cth), passed in 1997 now allows states and territories to confirm extinguishment.
Fee simple	A form of estate in land which is the largest known. For practical purposes it equates to ownership of land, and is commonly referred to as freehold title.
Flow regime	The spatial and temporal pattern of flows in a river.
Future act	a term used in the <i>Native Title Act</i> 1993 (Cth) to refer to either legislation passed after 1 July 1993 or any other activity taking place after 1 January 1994 which 'affects' native title. Title is 'affected' where native title rights are extinguished or compromised.
Gauging station	A site on a stream, lake, reservoir or other body of water where observations and hydrologic data are obtained.
Gigalitre	A metric measurement unit for liquids. Equates to one billion (1,000,000,000) litres.
Grandfather	A colloquial term referring to a situation where existing licences are validated by a new titling system.
Groundwater	Water that is held in the rocks and soil beneath the earth's surface.
Grants of Estate	The Crown giving title to land usually by way of a long term lease, or freehold title.
Groundwater management plan	A management plan prepared for a water supply protection area to manage the groundwater resources of the area.
Groundwater management unit	A hydraulically connected groundwater system that is defined and recognised by state and territory agencies.
Hydrology	The study of the distribution and movement of water.
Inflows	Surface water run-off and deep drainage to groundwater and transfers into the water system (both surface and

groundwater) for a defined area.

Integrated natural resource management	A way to ensure that uses of natural resources are ecologically sustainable. It is integrated because it attempts to manage all the activities that could affect natural resources, taking natural processes into account as well. It combines managing uses of natural resources with conservation. To do this it cuts across artificial distinctions such as government agency responsibilities, government or property boundaries, industry sectors and scientific disciplines. In defining management areas it gives priority to natural over human boundaries, for example using river catchments or bioregions as the primary basis for planning and management.
Macro planning process	An abbreviated process adopted in NSW with the intention of planning for large areas in a cost-effective and timely manner.
Megalitre	One million litres (about one Olympic-sized swimming pool).
Monitoring	An ongoing testing program to assess potential changes in circumstances.
Multi-criteria analysis	A methodology by which the relative merit of different proposals can be compared using a range of criteria. For a fuller discussion see Chapter 4.3 of Volume 1, Collaborative Water Planning: Context and Practice, Literature Review. Also referred to as multi-criteria evaluation.
National Water Initiative (NWI)	In June 2004 the Council of Australian Governments reached agreement on a National Water Initiative to improve the security of water access entitlements, ensure ecosystem health, expand water trading, and encourage water conservation in our cities.
Non-statutory	Refers to a situation where no statute or legal requirements are in place. 'Non-statutory water plans' comply with administrative or departmental requirements which may be easily changed with no or few consequences.
Outputs	Products or immediate consequences of a program's activities.
Overland flows	A term used particularly in Queensland, referring to water flowing over land other than in a river, stream or lake. It includes floodwater, and water rising to the

surface from groundwater.

Overallocation	Refers to situations where with full development of water access entitlements in a particular system, the total volume of water able to be extracted by <i>entitlement holders</i> at a given time exceeds the <i>environmentally sustainable level of extraction</i> for that system.
Overused	Refers to situations where the total volume of water actually extracted for consumptive use in a particular system at a given time exceeds the <i>environmentally sustainable level of extraction</i> for that system. Overuse may arise in systems that are overallocated, or it may arise in systems where the planned allocation is exceeded due to inadequate monitoring and accounting.
Peri-urban	This term refers to non-urban land that forms a belt around metropolitan centres. The land is often neither fully urban nor rural but put to a jumble of different, often unplanned uses.
Recharge	Inflow of water to a groundwater reservoir from the surface.
Regulated system	River system where the flow of the river is regulated through the operation of large dams or weirs.
Reliability	The frequency with which water allocated under a <i>water access entitlement</i> is able to be supplied in full. Referred to in some jurisdictions as “high security, general security”, or in Victoria, either high reliability or low reliability water shares.
Return flows	Water that has been diverted by industry or an irrigator and then returned to the river after use.
Runoff	That part of precipitation (rainfall) in a given area and period of time that appears as streamflow.
Socio-economic assessment of water planning	A document written for the community, a community panel and decision-maker. The intention is to provide enough information to determine a suitable course of action in the water plan. To do this readers are presented with current data relating social and economic issues in the plan area, important values of the community, and the positive and negative effects of various management options on the community.
Surface water	Water that flows over land and in water courses or artificial channels and is able to be captured and stored

and supplemented from dams and reservoirs.

Statutory	Relating to a statute or legislation eg a statutory plan refers to a plan that complies with requirements of legislation. See also non-statutory above.
Trading zones	Zones established to simplify administration of a trade by setting out the known supply source or management arrangements and the physical realities of relevant supply systems within the zone. Trade can occur within and between zones without first having to investigate and establish the details and rules of the system in each zone.
Unregulated system	River system where flows are not regulated by the operation of structures such as major dams or weirs.
Water access entitlement	A perpetual or ongoing entitlement to exclusive access to a share of water from a specified consumptive pool as defined in the relevant water plan.
Water allocation	The specific volume of water allocated to water access entitlements in a given season, defined according to rules established in the relevant water plan.
Water plan	Statutory plans for surface and/or ground <i>water systems</i> , consistent with the <i>Regional Natural Resource Management Plans</i> , developed in consultation with all relevant stakeholders on the basis of best scientific and socio-economic assessment, to provide secure ecological outcomes and resource security for users.
Water resource accounting	Systems to provide information about water availability, measurement and use, either at a national or regional level. A National Water Accounting Model is being developed to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.
Water system	A system that is hydrologically connected and described at the level desired for management purposes (eg sub-catchment, catchment, basin or drainage division and/or groundwater management unit, sub-aquifer, aquifer, groundwater basin).
Wetland	A low-lying area often covered by shallow water, such as marshes, mangroves, swamps, bogs or billabongs. Rich in biodiversity, they store and filter water and replenish underground water supplies.

Works

A term referring to dams, pumps or other structures put in place to extract or divert water.