Assessment of Governments' Progress in Implementing the National Competition Policy and Related Reforms

QUEENSLAND WATER REFORM

June 2001

NATIONAL COMPETITION COUNCIL

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Inquiries or comments on this report should be directed to:

Communications Officer
National Competition Council
12 / 2 Lonsdale Street
MELBOURNE VIC 3000

Ph: (03) 9285 7474
Fax: (03) 9285 7477
Email: info@ncc.gov.au

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The National Competition Council

The National Competition Council was established on 6 November 1995 by the *Competition Policy Reform Act 1995* following agreement by the Commonwealth, State and Territory governments.

It is a federal statutory authority which functions as an independent advisory body for all governments on the implementation of the National Competition Policy reforms. The Council's aim is to 'help raise the living standards of the Australian community by ensuring that conditions for competition prevail throughout the economy which promote growth, innovation and productivity'.

Information on the National Competition Council, its publications and its current work program can be found on the internet at www.ncc.gov.au or by contacting NCC Communications on (03) 9285 7474.

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Abbreviations

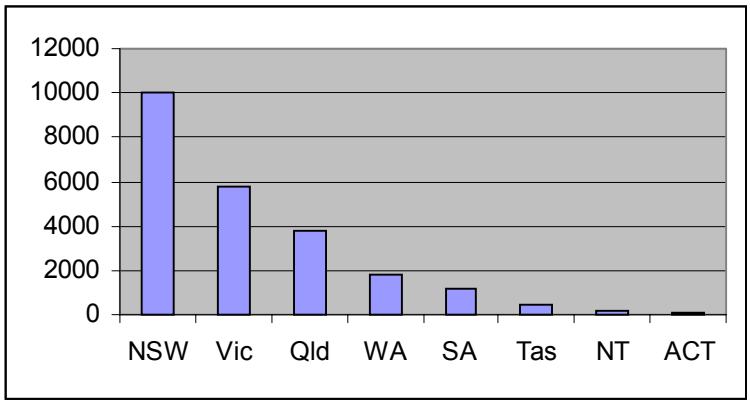
ACF	Australian Conservation Foundation
ANZECC	Australian and New Zealand Environment and Conservation Council
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
CoAG	Council of Australian Governments
CSO	Community Service Obligation
DNRM	Department of Natural Resources and Mines
MDBC	Murray-Darling Basin Commission
MDIA	Mareeba-Dimbulah Irrigation Area
NCC	National Competition Council
NCP	National Competition Policy
NLWRA	National Land and Water Resources Audit
NWQMS	National Water Quality Management Strategy
QCA	Queensland Competition Authority
QCC	Queensland Conservation Council
QFF	Quensland Farmers Federation
PC	Productivity Commission
ROP	Resource Operations Plan
SEQWater	South East Queensland Water Corporation
WERD	Water Entitlements Registration Database
WAMP	Water Allocation and Management Plan
WRP	Water Resource Plan
WSAA	Water Services Association of Australia
WWF	World Wide Fund for Nature

Introduction

For the last seven years governments across Australia have been implementing the strategic framework for the reform of the Australian water industry. As the reform program is progressing, there has been a growth in both the understanding of the complexity of these reforms and the level of national recognition of the importance of change.

Australia's water use is growing. Water use grew by 59 per cent between 1983-84 and 1996-97, mostly due to increases in irrigated agriculture. Chart 1 illustrates the level of water use for each State and Territory in 1996-97.

Chart 1: Mean annual water use 1996-97 (GL)



Source: National Land and Water Resources Audit (2001)

There has been significant progress since governments first agreed to the reform framework.

- Metropolitan water businesses have shifted from being part of a larger government bureaucracy to customer focussed commercial operations. This has generated benefits such as a real reduction in customer bills of nearly five per cent over the last four years, with improvements in drinking water quality and effluent treatment.

- Most urban Australians face water prices that reflect the amount of water they use and to create an incentive to conserve water.

- The need for water to be allocated to the environment is legally recognised across Australia.

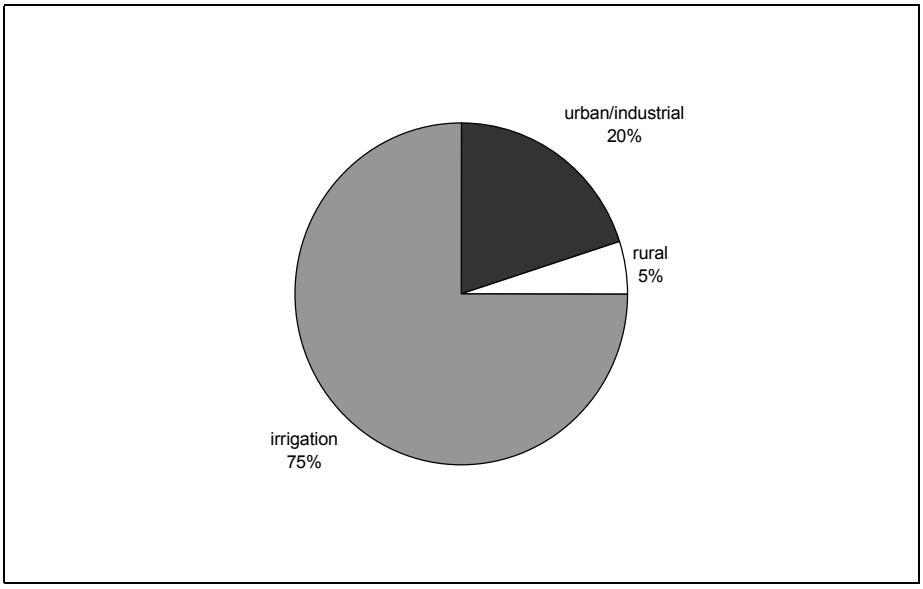
- Regional planning processes on natural resource management issues have started in all States and Territories and communities are heavily involved in consultation on these processes.

- All governments recognise the difficulties that are arising from incomplete scientific information on the ecology and hydrology of water systems, particularly groundwater systems. Governments are addressing this by adopting a precautionary approach to any further allocations of water and increasing the level of monitoring and research.

This is the National Competition Council's second major assessment of the implementation of water reform. The first (the second tranche assessment in June 1999) focussed on the passage of legislation and urban water reform. The June 1999 assessment identified a number of issues that needed to be progressed further before the Council could conclude that all of the States and Territories had met their water reform commitments. Consequently, following the June 1999 assessment there were four follow-up or supplementary assessments that addressed outstanding issues from the 1999 assessment.

The 1999 assessment process saw the passage of legislation that provides the overarching framework for many of the water reforms. The current assessment starts the process of reviewing how these frameworks are being implemented and whether, in practice, they are delivering appropriate reform outcomes. Previous assessments also focussed on the implementation of reforms in the urban sector because the timeframes in the CoAG water reform agreements envisaged urban reforms occurring first. However, as illustrated in chart 2, rural and irrigation water makes up the majority of water use in Australia.

Chart 2: Mean annual water use by category 1996-97 (gigalitres)



Source: National Land and Water Resources Audit (2001)

The Council's 2001 NCP assessment has a much broader focus. While it discusses outstanding urban pricing issues its primary emphasis is on the rural sector covering, pricing, property rights, water trading and environmental issues. This is the first assessment in which the agreements call for the Council to examine the detail of rural reform.

The 2001 NCP assessment has also recognised the importance of establishing clear property rights and allocating water to the environment through a transparent process of community based planning. The key elements of these processes are:

- governments setting timetables and supporting the development plans;
- community consultation and involvement in the planning process;
- the development of scientific information on which to base the plans; and
- finalised plans that provide:
  - sufficient information for stakeholders to understand the plan and its implications for irrigators, the environment and the community generally;
  - water for the environment in a way that reflects the current understanding of environmental needs; and
  - well defined water allocations that provide irrigators with predictability in their property rights.

Assessment

In its assessment the Council has identified that an important issue for New South Wales is the development of well defined property rights, including an appropriate registry system, while for Victoria the assessment raises issues about the process for allocating water for the environment. Both States have provided substantial responses to the Council detailing how they intend to deal with these issues both over the next twelve months and into the future. These will be important issues in the Council's 2002 NCP water assessment. New South Wales is consulting with stakeholders and will review its policy on the water rights registry system before November 2001. The Council will reassess New South Wales's approach to the water rights registry in December 2001.

Overall the Council's 2001 NCP assessment has concluded that all States and Territories have made sufficient progress to receive their 2001-02 NCP payments. However, while the Council found that the Queensland Government has taken a positive and active approach to encouraging reform among local governments, one local government, Townsville City Council has failed to explain why introducing reform of water pricing within its jurisdiction is not in the public interest. In this assessment, the Council recommended a permanent reduction of $270 000 in Queensland's NCP payments from 2001-02 (reflecting the remaining money available to Townsville Council for water reform through the Queensland Competition Authority's Financial Incentive Scheme). This reduction relates to the failure

by Townsville City Council to take a rigorous approach to considering consumption-based price reforms. The Council will reconsider Townsville's approach to two-part tariffs in the 2002 NCP assessment. It will look at both the progress made by Townsville and the State Government's efforts to resolve the issue. At that time, the Council will reconsider whether a continued reduction in competition payments is warranted and the appropriate size of any such reduction.

Finally, Queensland has acknowledged that the Condamine-Balonne is now a stressed river system. Consequently, the establishment of water allocations for the environment and consumptive use is now overdue. The Council will address this issue in its 2002 assessment. The Council is not satisfied that any of the options for setting environmental allocations specified in the draft water resources plan would be adequate to meet the environmental needs of the lower Balonne basin and the internationally listed Narran Lakes wetlands. More generally, the Council is not satisfied with the transparency of current reporting arrangements of the Government's final decisions for setting allocations. Queensland has agreed to address this concern over the next 12 months.

Local and national approaches to reform

The reform framework is a comprehensive approach that addresses the environmental, economic and social issues associated with water reform. It covers both surface and groundwater and recognises that while water reform is primarily a State responsibility some issues need to be addressed by coordination and cooperation between state initiatives. The approach to the Murray-Darling Basin is an obvious example.

State and Territory governments recognise the need for a more coordinated approach and are increasingly looking at water reform issues jointly. While some of these processes are in their early stages, it is the Council's view that they need greater emphasis if water reform generally is going to deliver the outcomes all stakeholders recognise as necessary. The following are examples where national approaches have been initiated to address important reform issues.

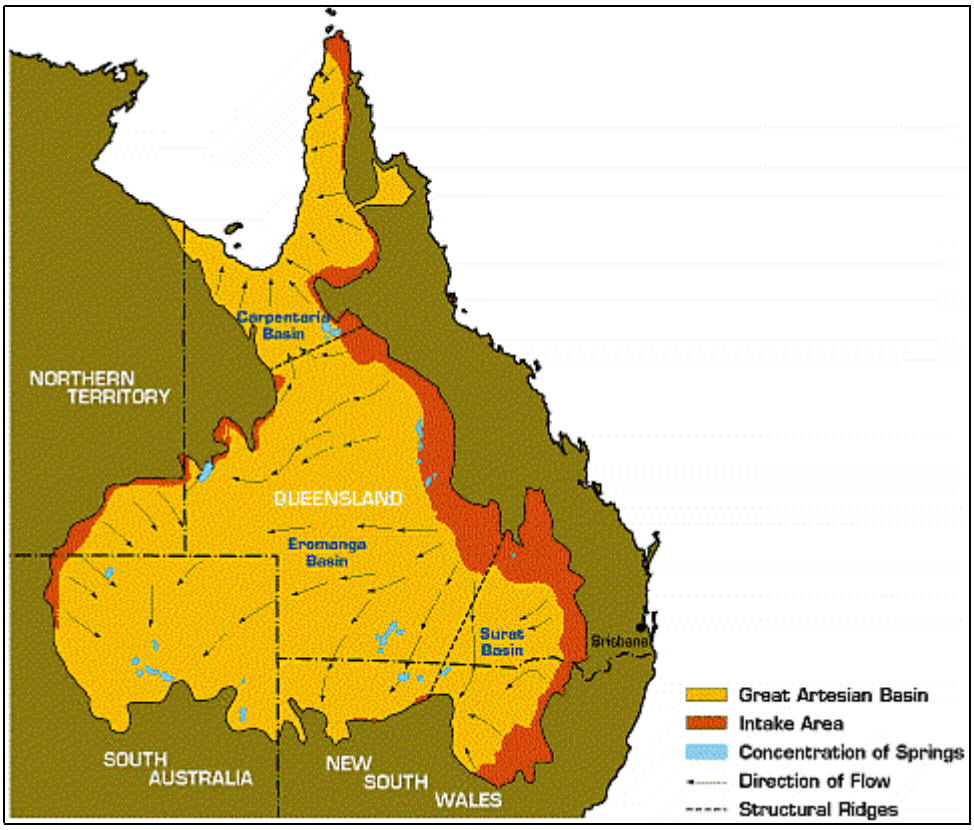
Managing groundwater basins cooperatively

The Great Artesian Basin is the largest artesian groundwater basin in the world. It underlies approximately one-fifth of Australia and extends beneath the arid and semi-arid parts of Queensland, New South Wales, South Australia and the Northern Territory, stretching from the Great Dividing Range to the Lake Eyre depression. The Basin covers a total area of over

1 711 000 square km and it has an estimated total water storage of 8 700 million megalitres (a megalitre is one million litres and is equivalent to about half the water in an Olympic swimming pool).

Many bores initially flowed at rates of over 10 megalitres per day. However, the majority of flows are now flowing between 10 000 litres and six megalitres per day. Total flow from the Basin reached a peak of over 2 000 megalitres per day around 1915, from approximately 1 500 bores. Since then, artesian pressure and water discharge rates have declined, while the number of bores has increased. The total flow from the basin during 1995 was in the order of 1 200 megalitres per day.

Figure 1: Great Artesian Basin



Source: www.gab.org.au (accessed July 2001)

The Great Artesian Basin Strategic Management Plan is a good example of a cooperative approach to managing groundwater resources. This plan was released in September 2000 after agreement by the Commonwealth, New South Wales, South Australia and Northern Territory Governments.

The plan proposes the following strategies to address basin management issues:

- a commitment to resource management partnerships to accelerate change;
- programs to encourage and achieve agreed understanding of the worth of the water resource;

- expanded infrastructure renewal programs, underpinned by public investments to:
  - stimulate private investments to minimise water losses and wastage; and
  - provide a platform for further investments in meeting environmental, social and economic objectives;
- changes to institutional arrangements and water entitlement systems to provide security of access to water (including water supply to priority groundwater-dependent ecosystems). Opportunities for new higher-value uses and clear responsibility for maintaining bore and reticulation systems maintenance;
- promotion of the socio-economic, environmental and heritage values of the basin;
- an emphasis on the need to sustain commitments to infrastructure renewal, maintenance and improved management;
- programs to improve knowledge and the technology underpinning improved management; and
- monitoring and evaluation to assess progress towards specific natural resource management outcomes sought through the plan.

These strategies provide guidance for governments, water users and other stakeholders on policies, programs and actions necessary to attain optimum economic, environmental and social benefits from the existence and use of basin groundwater resources.

This Great Artesian Basin Strategic Management Plan is expected to be implemented over the next 15 years at a cost of $286 million.

Interstate Trading

The CoAG water agreements explicitly recognise interstate trading as an important component of water reform. This view is reinforced by the observations made by the CSIRO that while '..intrastate trading is driving the market for water, interstate trading arrangements are keeping the various markets in place.' (CSIRO 2000, p.2)

The Murray-Darling Basin Commission's Pilot Interstate Water Trading Project was established to promote interstate water trading within the basin. The objective of the pilot is to facilitate and promote interstate trade of high-security water in the Mallee region of South Australia, Victoria and New South Wales as shown in figure 2.

Figure 2: The pilot interstate water trading project area

Source: CSIRO (2000)

The pilot, in operation since 1998, has resulted in:

- the increased value of water use in the basin by allowing water to move to higher value uses;
- the expansion of the number of traders able to participate in the water trading marketplace by allowing permanent trade to occur across State boundaries; and
- the movement of water out of degraded or areas of high environmental risk. (CSIRO 2000)

The Murray-Darling Basin Commission keeps a register of all transfers and calculates exchange rates for each trade. It must also assess each trade on the basis of any environmental damage it may cause and the physical capability of the system to deliver the water. The exchange rates are designed to account for transmission system losses in the river channel and for changes in the level of water supply security. The security can fall in response to the decreased ability to retain water within storages as the water moves upstream.

According to the review, the pilot enabled 51 trades — accounting for more than 9.3 gigalitres — between 1998 and September 2000. The total value of these trades was more than $9.9 million, with three trades individually worth more than $1 million. More than 90 per cent of the water traded (more than 8.8 gigalites) was transferred to South Australia.

The pilot was assessed in a two-year review of interstate trading (reported by the MDBC 2000). The review examined the net effect of the pilot and noted areas where progress or improvement could be made. The review findings included:

- that arrangements for interstate trade are improving;
- that administrative arrangements are an impediment to efficient trade and need to be streamlined;
- that interstate trading is increasing the value of water use in the Murray-Darling Basin;
- that interstate trade has had no measurable adverse social impact during the pilot;
- that environmental impacts are mixed. The environmental flow impact has probably been positive, while the salinity impact is expected to be negative;
- that exchange rates are poorly understood; and
- that mechanisms for enforcement need to be improved.

While going a long way to promote interstate trade, the Murray-Darling Basin Commission trial is restricted in both the area covered and the type of water rights that can be traded. Consequently, there are three issues governments will need to focus on in the future.

First, different types of water property rights exist within the basin. In some instances, inconsistent property rights could impeded interstate trade. A consistent approach to the key components of property rights, for example, security of tenure and security of water — is needed. Also needed is an exploration of opportunities to better define and specify the water property rights across the basin and to improve the exchange rate arrangements to reflect fully the extent of overallocation, security of tenure and the salinity impact. The Council notes the effort of the Murray-Darling Basin Commission in attempting to resolve some of these issues. In the 2002 NCP assessment, the Council will review the progress made in addressing concerns about property rights and, where relevant, check whether all jurisdictions have cooperated to resolve difficulties.

Second, the broader environmental impacts of trading will depend on the degree to which individual States set and enforce irrigation and drainage plans. The Murray-Darling Basin Commission and the member States need to consider further the best means by which to address environmental impacts of interstate trade.

Third, as the previous two issues are addressed, consideration needs to be given to expanding the pilot both in the area covered, and the types of licences that can be traded. For example, consideration is currently being given to the

creation of a second pilot zone between New South Wales and Queensland in the Border Rivers catchment.

Restoration of the Snowy River

The Snowy River is an Australian icon which has been degraded over the last 50 years as a result of the Snowy Mountains Hydro-electric Scheme. Its cultural, social and environmental values to the Australian community are immense and thus Governments have agreed that it is the top priority for restoration. The Victorian, New South Wales and Commonwealth Governments have agreed to restore this river with a combination of flow improvements generated by water saving projects and habitat improvements. The three governments have agreed to provide $375 million over 10 years to achieve this.

National benchmarking

States and Territories have established a national process to extend inter-agency comparisons and benchmarking. Benchmarking systems are in place for the non-metropolitan urban and rural sectors, *WSAA Facts* is to be used to benchmark major urban service providers.

All States and Territories are participating in benchmarking projects.

The Water Services Association of Australia has been benchmarking major urban water service providers for 6 years. The most recent report covers 1999-2000 data. *WSAA Facts* (2000) covers 21 water businesses and provides information on:

- customer profiles and water volumes;
- service performance including, health, environment, service delivery and pricing;
- infrastructure; and
- economic and financial performance.

For the non-metropolitan urban sector, a report is compiled by the Australian Water Association under the direction of the Non Major Urban Water Utilities Working Group. The second national benchmarking report for the non-metropolitan urban service providers covered 1998-99 data and was released early in 2000. The report provides information covering 67 utilities from all States and the Northern Territory. It includes information on:

- customer and utility profiles;
- prices and revenues;

- energy consumption for water supply and environment (for waste water);
- levels of service;
- operating costs; and
- whole of business performance summary.

In total, the non-metropolitan urban and *WSAA Facts* benchmarking reports cover water services to 83 per cent of the Australian population.

For rural schemes the second industry benchmarking report, covering 1998-99 data was prepared by the Australian National Committee on Irrigation and Drainage and released in February 2000. The report provides comparisons of performance in four key areas:

- systems operation;
- environmental issues;
- business processes; and
- financial aspects.

The Australian National Committee on Irrigation and Drainage is continuing to improve and refine their approach to benchmarking. The report notes, however, that data collection and reporting processes are still being developed and, therefore, this limits the ability to compare information between the 1997-98 and 1998-99 reports. It appears that the industry has a strong commitment to this project, as there was a 40 per cent increase in the number of rural service providers participating in the rural benchmarking project.

National Land and Water Resources Audit

The audit is a program of the Natural Heritage Trust. It was set up in 1997 to help improve decision-making on land and water resource management in Australia. In 2000, the fourth water resources assessment was undertaken in partnership with Commonwealth, State and Territory agencies.

The national audit provides summary information at national, State and Territory and surface water basin and groundwater management unit levels. It also identifies gaps and monitoring requirements which need to be addressed in order to make more effective water resource management decisions.

The key outputs of the water resources audit are to better define Australia's surface and groundwater management areas. The audit also attempts to quantify the amount of water being used and how it is being used and allocated.

The audit found that:

- of Australia's surface water resources, 84 of 325 basins (25 per cent) are either fully allocated or overallocated in terms of sustainable flow regimes. Of the 325 surface water basins, 44 have formal allocations for the environment;

- of Australia's groundwater resources, 161 of 538 groundwater management areas are either fully allocated or overallocated in terms of the sustainable yield assessments;

- water use efficiency, recycling, trading and pricing are increasingly becoming priorities and provide opportunities for development. To support this shift in development emphasis, improved information on water use is essential;

- water availability is at the centre of economic development and environmental management; and

- it is essential that Australia capitalise on the data collection investment of States and Territories and the audit and put in place Australia wide assessment and reporting systems.

The National Land and Water Resources Audit also produced a *Dryland Salinity Assessment 2000* in collaboration with the States and Territories which defines the distribution and impacts of dryland salinity across Australia.

The dryland salinity assessment concluded:

- approximately 5.7 million hectares of Australia are within regions mapped to be at risk or affected by dryland salinity. It has been estimated that in 50 years time the area of regions with a high risk may increase to 17 million hectares (three times as much as now);

- some 20 000 kms of major road and 1600 kms of railways occur in regions mapped as high risk. Estimates suggest these could be 52 000 kms and 3600 kms respectively by 2050;

- salt is transported by water. Up to 20 000 kms of streams could be significantly salt affected by 2050;

- Areas of native vegetation (630 000 hectares) and associated ecosystems are within regions with areas mapped to be at risk. These areas are projected to increase by up to 2 000 000 hectares over the next 50 years; and

- Australian rural towns are not immune: over 200 towns could suffer damage to infrastructure and other community assets from dryland salinity by 2050.

National Action Plan for Salinity and Water Quality

On 3 November 2000, CoAG endorsed the Commonwealth's proposal for an action plan to address salinity, particularly dryland salinity, and deteriorating water quality issues. These issues are of major national significance and are appropriately handled through a national action plan.

Salinity and deteriorating water quality are seriously affecting the sustainability of Australia's agricultural production, the conservation of biological diversity and the viability of our infrastructure and regional communities. At least five per cent of cultivated land is now affected by dryland salinity – this could rise as high as 22 per cent. One third of Australian rivers are in extremely poor condition, and land and water degradation, excluding weeds and pests, currently costs approximately $3.5 billion per year.

The Action Plan builds on the achievements of the Natural Heritage Trust, initiatives by individual State and Territory governments, the CoAG water reforms, and the work of the Murray-Darling Basin Commission.

The goal of the Action Plan is to motivate and enable regional communities to use coordinated and targeted action to:

- prevent, stabilise and start to reverse trends in dryland salinity affecting the sustainability of production, the conservation of biological diversity and the viability of our infrastructure; and

- improve water quality and secure reliable allocations for human uses, industry and the environment.

The national Action Plan will involve six elements, all of which are necessary to achieve lasting improvements over dryland salinity and deteriorating water quality:

1. targets and standards for salinity, water quality and associated water flows, and stream and terrestrial biodiversity agreed either bilaterally or multilaterally, as appropriate;

2. integrated catchment/regional management plans developed by the community and accredited jointly by Governments, in the 20 agreed catchments/regions that are highly affected by salinity, particularly dryland salinity, and deteriorating water quality;

3. capacity building for communities and landholders to assist them to develop and implement integrated catchment/region plans, together with the provision of technical and scientific support and engineering innovations;

4. an improved governance framework to secure the Commonwealth, State and Territory investments and community action in the long term: including property rights; pricing; and regulatory reforms for water and land use;

5. clearly articulated roles for the Commonwealth, State, Territory, local government and community to provide an effective, integrated and coherent framework to deliver and monitor implementation of the action plan; and

6. a public communication program to support widespread understanding of all aspects of the action plan so as to promote behavioural change and community support.

The Action Plan involves new expenditure by Commonwealth, State and Territory governments of $1.4 billion over the next seven years. The Commonwealth's financial contribution of $700 million for regional implementation of the action plan will be matched by new State and Territory financial contributions.

CoAG agreed that compensation to assist adjustment where property rights are lost will need to be addressed in developing catchment plans. While any such compensation is the responsibility of the States and Territories, the Commonwealth is prepared to consider making an additional contribution, separate from the $700 million announced to implement the Action Plan.

National objectives for biodiversity conservation

In June 2001, the Commonwealth, New South Wales, Victoria, South Australia, Western Australia and the ACT endorsed an overarching policy document that sets targets and objectives for national biodiversity conservation in Australia.

The objectives cover such areas as:

- protection and restoration of native vegetation and terrestrial ecosystems;
- freshwater ecosystems, marine and estuarine ecosystems;
- control of invasive species;
- integration of measures for dryland salinity;
- promotion of ecological sustainable grazing;
- minimisation of the impact of climate change on biodiversity;
- maintenance of the biological knowledge held by indigenous people;

- improvement in scientific knowledge and access to scientific information; and

- introduction of institutional reform in integrated regional management and review and remove any legislative impediments to biodiversity conservation.

High Level Steering Group

The High Level Steering Group on Water provides a good example of intergovernmental cooperation in water reform. The group is set up under the Agriculture and Resource Management Council of Australia and New Zealand and comprises representatives of the agriculture and environment agencies of the Commonwealth and Australian State Governments.

This group's role is to help maintain the impetus of the CoAG water reforms, by reporting to the Agriculture and Resource Management Council of Australia and New Zealand and the Australian and New Zealand Environment and Conservation Council on progress in implementing reform. Importantly, the High Level Steering Group is also involved in valuable work to assist in implementation of the water reforms. This has included commissioning research on key reform issues such as costing and charges for externalities, establishing a consistent national approach to water trading, institutional approaches to water resource management, water for the environment and opportunities for improved management of groundwater. It is intended that, once finalised, these papers will be available on the Commonwealth Department of Agriculture Fisheries and Forestry website.

The Council's approach to assessing progress

The Council's approach to assessing the water component of the 2001 NCP assessment has recognised the complexity of the issues and the level of detail and breadth of the agreements. This assessment needs to accommodate the fact that each State and Territory faces different problems and has started with different sets of environmental and institutional characteristics.

The Council based its 2001 assessment on information provided by State and Territory Governments, its own research, and other reports including:

- The Australian Urban Water Industry (WSAA Facts);

- The National Land and Water Resource Audit Assessment of Water Resources 2000; and

- work by the High Level Steering Group on Water.

Stakeholders have also had a substantial input into this assessment. The Council received 10 submissions from irrigators and environmental groups. None of these submissions questioned the need for reform, or the underlying objectives of the water agreements. Generally, the submissions discussed the process and speed of reform and which aspects of the reform package should be given priority. However, there is universal recognition that appropriate water reforms are fundamental to Australia's future.

To facilitate a broad understanding of the Council's approach and to enable interested stakeholders to provide submissions the Council released a framework for the 2001 NCP assessment in February 2001.

The CoAG water reform agreements generally provide very broad descriptions of the water reform obligations. Because of this, the framework developed a more detailed explanation and interpretation of the water reform obligations. The framework did not redefine the commitments determined by CoAG, rather it's aim was to:

- provide a clear, transparent basis for assessment particularly in relation to matters considered in previous assessments;

- identify the type of information that jurisdictions should provide to demonstrate compliance; and

- provide a basis for early identification and bilateral discussion of areas where achieving reform outcomes is proving difficult.

The assessment framework is at appendix A to this document.

To further assist informed debate the Council also released seven discussion papers (see box 1). The discussion papers are available on the Council's website.

In this report the Council has provided comprehensive coverage of the water reform assessment issues identifying current and future issues and providing sufficient information to inform stakeholders of the reasons for the assessment.

Box 1: Background information papers on water reform commitments

Rural water pricing - covers full cost recovery in the rural sector including CSOs and positive rates of return.

New investment in rural water infrastructure - discusses a methodology to assess the economic viability and ecological sustainability of new investments in this area.

Institutional reform issues in the water industry - discusses why regulation is important and examines the potential for conflicts of interest between regulation and service provision and arrangements to deal with these.

Environmental requirements of the CoAG Water Reforms (paper prepared with the assistance of Environment Australia) - outlines the national agreements on the environment that may be useful as a guide in reporting progress against the environmental requirements of the water framework.

Implementing the National Water Quality Management Strategy (paper prepared by Environment Australia and the Department of Agriculture Fisheries and Forestry Australia in consultation with State and Territory government agencies) - the Commonwealth, after consultation with States and Territories, has proposed that implementation of the guidelines should be assessed through a two yearly review process. This paper provides a list of the component modules of the National Water Quality Management Strategy guidelines and their current status. The Council will be looking to jurisdictions to show how the guideline principles have been adopted in the 2001 NCP assessment and subsequent assessments.

Defining water property rights - discusses the specification of water property rights so as to promote efficient and sustainable investment and trade.

Water reform and legislation review - outlines the status of legislation reviews of relevant water legislation for each jurisdiction based on a stocktake report conducted by Marsden Jacob consultants.

Queensland

Queensland derives over 75 per cent of its total water needs from surface systems. Around 70 per cent of Queensland's surface water is derived from coastal systems. The Great Artesian Basin that also underlies parts of New South Wales, South Australia and the Northern Territory dominates the ground water resource in Queensland. Irrigation accounts for 65 per cent of total water use in the State, while urban water use accounts for 17 per cent. Stock and domestic, industry (including mining) and power generation represent 14 per cent, 3 per cent and 1 per cent of total water use respectively.

The major water service providers in Queensland include 125 local governments, four urban water boards, SunWater and several other providers. The *big 18* local government water service businesses account for 80 per cent of water connections in Queensland. The four urban water boards (South East Queensland Water Board, Townsville-Thuringowa Water Supply Board, Gladstone Area Water Board, and Mount Isa Water Board) provide water to a number of councils, industrial customers and power stations. SunWater (formerly State Water Projects) is a government owned corporatised entity that provides around 40 per cent of Queensland's irrigation water. SunWater is the State's largest water service provider accounting for nearly 50 per cent of all water consumed in Queensland.

The Department of Natural Resources and Mines is responsible for water allocation and management and water service provider regulation. Under the *Water Act 2000* all water service providers must be registered, with registration attaching a series of regulatory obligations, which must be met.

The Environmental Protection Agency is responsible for environmental protection and regulation of water quality (with the exception of drinking water). The Department of Health regulates drinking water quality. The Queensland Competition Authority is responsible for prices oversight of the largest providers in the water industry.

Progress on reforms

Pricing and cost recovery

Urban water services

Just over 70 per cent of the 125 local government water businesses in Queensland apply CoAG water pricing principles under a three-tier framework. Thirteen of the big 18 local government water businesses are commercialised and the remaining five have adopted full cost pricing. However, reform progress among the local government water businesses outside the big 18 has been slower.

The Local Government Association of Queensland and the Queensland Government developed a strategy to promote CoAG water reforms, including pricing reforms beyond the big 18. This strategy, the Business Management Assistance Program, includes assisting local government businesses to design two-part tariff regimes, enhancing their in-house capability to adopt pricing reforms and extending the deadline for receipt of incentive payments offered under the Local Government NCP Financial Incentive Package. The Council will monitor the outcomes from this Program. Furthermore, the Council will look for progress in including taxes or tax equivalent regimes within cost recovery arrangements outside the big 18 service providers.

Queensland does not explicitly incorporate environmental costs into urban prices. However, through Resource Operations Licences, it does improve environmental obligations to service providers who operate bulk infrastructure (such as dams).

While the costs of complying with the licence (and thus the resource management costs) are to be met by the service providers, this is unlikely to fully reflect resource management costs associated with urban water use. The Council will review this matter in future assessments.

The Council notes that all but one of the big 18 service providers have implemented or are in the process of implementing two-part tariffs. However, despite the Council raising its concerns in the June 1999 second tranche NCP assessment, the Townsville City Council has failed to demonstrate that it objectively analysed the cost effectiveness of two-part tariffs and provided a public interest justification on why it will not implement price reforms. Consequently the Council has recommended a permanent reduction in Queensland's competition payments of $270 000 from 2001-02. This amount reflects an approximation of the remaining money Townsville is entitled to through the Queensland Competition Authority's financial incentives scheme. The Council has chosen this approach to reflect that the Queensland State government has proactively encouraged reform. However, Townsville has

neither committed to introducing two-part tariffs nor provided a public benefit justification of why the implementation of two-part tariffs is not in the public interest.

The Council will reconsider Townsville's approach to two-part tariffs in its 2002 NCP assessment. It will look at both the progress made by Townsville and the State Government's efforts to resolve the issue. At that time the Council will reconsider whether a continued reduction in competition payments is warranted and the appropriate size of any such reduction.

The Council welcomes the progress made by many of the 10 next largest local government providers, in moving towards the introduction of two-part tariffs. The Council will look for continued progress in this area in future assessments.

Many of the 42 local government providers (with 1000 to 5000 connections) are considering the implementation of two-part tariffs. However, several have decided not to assess the cost effectiveness of introducing two-part tariffs. Some of these providers have the State's largest free water allowances. This raises questions about whether these providers are appropriately implementing the water pricing reforms. The Council will review progress again in the 2002 NCP assessment.

All four urban water boards charge for water consistent with the principles of volumetric based charging.

Domestic and commercial/industrial wastewater charges across the local government providers in Queensland are based on either a fixed charge or a fixed charge with an additional charge for each additional pedestal. The Council understands that some local governments also levy trade waste charges. Local governments provided no details of these charges. The Council is satisfied that wastewater charges are consistent with CoAG requirements but will consider the issue of trade waste charges at the 2002 NCP assessment.

The Council notes that the CSOs and cross-subsidies provided by the *big 18* water and wastewater businesses are being transparently reported. Queensland has made a policy decision that only type 1 and 2 businesses are required to identify and reports CSOs and cross-subsidies. As a result, only a few of local government providers outside the big 18 have disclosed such information. The Council will look for further progress on the identification and transparent reporting of CSOs and cross-subsidies of the local government providers beyond the big 18 in future 2002 NCP assessments. No CSOs have been identified as being provided by the urban water boards.

Rural water services

A move towards cost recovery by SunWater is being managed via a two-pronged approach. First, SunWater is required to achieve efficiency improvements leading to a 15 per cent reduction in operating costs by 2004. Second, a five-year price path for each of SunWater's 31 irrigation schemes has been developed in consultation with the participants of the schemes. As a part of this approach an independent benchmarking exercise was completed to obtain a reliable base for SunWater's costs. The benchmarking exercise enabled SunWater to identify specific areas where cost reductions can be targeted. Queensland has undertaken to re-benchmark SunWater's costs in 2004.

Significant concerns have been raised by several irrigator groups in relation to the estimates of efficient costs used in setting the price paths and in regard to the level of consultation. SunWater is required to establish Customer Councils for all of its irrigation schemes. These councils are intended to give irrigators the opportunity to provide input into SunWater's decision making process on an advisory basis. The Council will look for evidence that Customer Councils have had an adequate opportunity to provide feedback in relation to standard setting decisions and efficiency improvements in he future. The Council will review the progress associated with cost recovery in the 2002 NCP assessment.

Two-part tariffs have been in place for most of the irrigation schemes operated by SunWater since 1997-98. The Council is satisfied that rural water services provided by SunWater reflect the principle of consumption based pricing consistent with CoAG commitments.

In the 2002 NCP assessment the Council will look for evidence that Queensland is refining its other rural water charges (applied in unregulated areas, water harvesting in regulated areas and water extraction in ground water management areas) and in particular is eliminating the current ceiling on volumetric charges. Further the Council will look for progress in addressing the potentially non-transparent cross-subsidies associated with the charges for other rural water services.

The Council is satisfied that Queensland has met the CoAG commitments for this assessment in relation to ensuring economic viability and ecological sustainability of new investment in rural water schemes.

Institutional reform

The Council concluded in its supplementary second tranche NCP assessments that Queensland had met institutional reform requirements. Since the second tranche NCP assessment Queensland has made further progress in reforming the institutional role separation in the water sector. For example, the enactment in September 2000 of the *Water Act 2000* provides a framework for

the allocation, management and regulation of the State's water resources. Other key reform initiatives include prices oversight by the Queensland Competition Authority, corporatisation of SunWater and restructuring the Department of Natural Resources and Mines.

In the area of economic regulation, most of the significant water businesses (including the *big 18* local government water service businesses) have, or will be, declared for prices oversight. Under the *Water Act 2000* all service providers are required to prepare customer service standards and provide a copy of those standards to all customers not covered by a contract.

Under the current arrangements, the Department of Natural Resources and Mines has resource management and water allocation roles while all the service delivery functions are now the responsibility of SunWater. The Minister for Natural Resources and Mines is a joint shareholder in SunWater. Hence, certain ministerial decisions could potentially affect the commercial aspects of the SunWater's business. Given Queensland's existing arrangements for separating service delivery and regulation, and the commitment to improve transparency in reporting the final water resource plan, the Council has concluded that there is sufficient transparency in decision making.

Arrangements for regulation of drinking water quality are being reviewed in Queensland as part of the review of the *Health Act 1937*. In the 2002 NCP assessment the Council will look at what arrangements are in place to manage drinking water standards across the State.

Queensland is continuing to meet its commitments on the commercial focus of urban service providers and participate in benchmarking arrangements.

The Council considers that Queensland's approach to local management of irrigation is restrictive. Irrigators only had until mid-2001 to negotiate on local management. This is a very short time frame. After mid-2001 irrigators will not have another opportunity to negotiate the adoption of local management until 2003.

Customer Councils are intended to give irrigators the opportunity to provide input on an advisory basis into SunWater's decision making process. The Council will monitor the operations of the Customer Councils to ensure that SunWater is using them as an effective mechanism for seeking input from irrigators into decision making.

The Council is satisfied that Queensland has complied with institutional reform commitments for this NCP progress assessment.

Allocation

The framework for allocation, management and regulation of water in Queensland is set out in the *Water Act 2000*. Water resource plans are the principal water-planning tool under the Water Act. They specify the rules on how water will be allocated, environmental flow provisions and water allocation security objectives. Water resource plans are of a 10-year duration and are implemented through resource operation plans.

As at March 2001, water resource plans have been completed for Fitzroy River Basin, Cooper Creek Basin, Boyne River Basin and Burnett River Basin. Further, draft plans have been released for the Condamine–Balonne, Moonie and Warrego/Paroo/Bulloo/Nebine. To date, no resource operation plans have been finalised. Draft resource operation plans for the Fitzroy River Basin and Boyne River Basin are currently being prepared with the former to be the first released for public comment in September 2001.

Since its supplementary second tranche NCP assessments the Council has considered further the provisions of the *Water Act 2000* including progress in implementing the water resource plans and resource operation plans and the efficacy of water property rights. The Council is of the view that Queensland's system of water property rights meets the requirements for this assessment.

Under the *Water Act 2000*, periodic reports are to be prepared for each water resource plans covering issues such as: an assessment of the effectiveness of the implementation of the water resource plans in meeting the water resource plans' objectives (including environmental objectives); any new information available about water covered by the plan; and information about any non-compliance with the water resource plan and the resource operation plan. The Council will continue to review further progress in implementing the water resource plans and related processes in future assessments.

Water resource plans identify and specify water for the environment. This is done on the basis of best scientific information available. The Council has examined the completed plans and has concluded that overall the allocations in the plans for the Fitzroy Basin, Cooper Creek, Boyne Basin and Burnett Basin adequately meet environmental requirements.

The Council has also examined the Condamine–Balonne Basin draft water resource plans. On the basis of the evidence available, including the findings of the Independent Audit Group of the Murray—Darling Basin Commission, the Council notes that the lower portion of the basin may now be considered a stressed river system. The Condamine–Balonne Basin is a region of intensive water use within Queensland's area of the Murray—Darling Basin and the region contains 20 per cent of all Murray—Darling Basin wetlands. The Council has serious concerns with the three options currently being proposed to establish environmental flow objectives in the Condamine–Balonne Basin draft water resource plan. On the basis of information currently before the Council, it considers that adoption of any of the three options proposed in the

draft water resource plan is likely to lead to a substantial reduction in Queensland's NCP payments in the 2002 NCP assessment. For the 2002 NCP assessment, the Council would expect Queensland to have in place a robust and an appropriate final water resource plan for the Condamine–Balonne Basin and the associated resource operation plan.

The Council has noted general concerns in relation to the lack of transparency in developing the water resource plans. The Queensland Government has recognised this and has made a commitment to address it by increasing the scope of information released when the water resource plan is finalised.

Trading

The *Water Act 2000* provides the framework for water trading in Queensland. Primarily this would require the full implementation of the water resource plans and the associated resource operation plans in the prospective water trading areas. The Council considers that, in the main, the legislative framework in the Water Act should ensure clear specification of the water property rights. However, there are a number of aspects in the framework that could potentially hinder trading. In particular, provisions in the legislation could limit the volume of water that may be transferred between locations, whether inside or outside Queensland, or for different purposes. Another area of potential concern is the provision that limits water trade to primary production. This is not in the spirit of the CoAG guidelines as it may prevent water from moving to its highest value use.

Trade in Queensland is currently limited. There has been one pilot program of permanent water trading in the Mareeba—Dimbulah Irrigation Area since 1999. The demand for permanent trade in the Mareeba—Dimbulah Irrigation Area has been low with only four trades in 1999-2000, totalling 164 megalitres. Queensland has indicated that interim arrangements will be established in other regions to allow permanent trade until trading rules are developed with the resource operation plans.

Queensland has made significant progress towards developing a framework for efficient water trading. However, there is still a long way to go in implementing the required mechanisms. The Council will make a further NCP assessment in 2002 to evaluate the extent of progress with the implementation of first, the use of interim trading arrangements and second, the resource operation plans and the associated trading rules in the prospective trading areas.

The Council is satisfied that Queensland has complied with water allocation and trading reform commitments for this assessment.

Environment and water quality

In its second tranche NCP assessment the Council noted the progress made by Queensland towards meeting its commitments in relation to the environment and water quality aspects of the water reform framework. Since the second tranche NCP assessment the 13 regional strategy groups operating in Queensland are developing natural resource and biodiversity management strategies. The 38 Catchment Management Coordinating Committees are continuing with development of catchment strategies with 27 of them receiving endorsement. The Council considers there is adequate evidence of on-the-ground implementation of catchment management in Queensland.

The *Water Act 2000* requires water use plans to be prepared when there is a risk of land and water degradation in an area. In light of the potential for growth in water allocations, due to the water resource plans process occurring across Queensland, the Council will monitor the use of water use plans to control any adverse impacts likely to arise from the new allocations.

In relation to water quality, Queensland is demonstrating a high level of commitment to ongoing implementation of the National Water Quality Management Strategy guidelines. With regard to water quality monitoring, the Council observes that there appears to be insufficient water quality data relating to some river basins in Queensland. Queensland needs to address this issue.

The Council is satisfied for this NCP assessment that Queensland has complied with environment and water quality reform commitments.

Consultation and education

The Queensland Government has engaged in a number of community consultation and public education programs regarding the implementation of water reforms. For example, Queensland released for consultation a number of policy papers and a draft Bill in developing the *Water Act 2000*.

The *Water Act 2000* provides a statutory basis to ensure all stakeholders are consulted during the development of water resource plans and resource operation plans for catchment areas. There is some concern regarding the adequacy of information available to the stakeholders from the draft water resource plan stage to the final plan. The Council has raised this issue with Queensland. In preparing water resource plans, Queensland has committed to provide adequate information relating to a move from a draft to final stage and to indicate any trade-offs made in the final water resource plan.

The Council is satisfied for this NCP assessment that Queensland has complied with public education and consultation reform commitments. The Council will monitor developments in the area of public consultation and the

provision of information relating to the development of water resource plans in future assessments.

Assessment

The Council is satisfied that the Queensland Government has met reform commitments required for the 2001 NCP assessment. The Council acknowledges the state's substantial degree of commitment to and progress in water reform.

However, the Council has found that one local government, the Townsville City Council has failed to demonstrate that it has objectively analysed the cost effectiveness of two-part tariffs and provided a public interest justification on why it will not implement price reforms. Two years have passed since the Council first expressed its concerns in regard to Townsville and these matter are still to be resolved. Consequently, the Council has recommended an ongoing annual reduction in Queensland's competition payments of $270 000 from 2001-02. This amount is an approximation of the remaining money Townsville would have received through the Queensland Competition Authority's financial incentives scheme for appropriate implementation of water reform. The Council has chosen this approach to acknowledge the fact that the Queensland Government has otherwise met all of its NCP obligations and has actively encouraged implementation at the local government level, including by Townsville City Council. The Council will reconsider Townsville's approach to two-part tariffs in the 2002 NCP assessment. The assessment will consider both the progress made by Townsville and the State Government's efforts to resolve this issue. At that time the Council will reconsider whether an annual reduction in competition payments should continue beyond 2001-02, including the size of any such reduction.

Pricing and cost recovery: urban

Governments have agreed that urban, non-metropolitan urban and rural water services should introduce full cost recovery and consumption-based pricing, and identify and report CSOs and cross-subsides (clause 3).

In Queensland, urban water services are predominantly a local government responsibility. Urban services include providing bulk and reticulated water and wastewater services to households, businesses and industry in metropolitan areas and non-metropolitan urban areas such as country towns. Services to other areas are broadly classified as rural services and include bulk water provided for irrigation, mining etc, drainage services and licensing services. Some water businesses (such as SunWater) may provide services to more than one sector of the industry.

Urban water use accounts for 17 per cent of total water use in Queensland. Local government water assets are valued at more than $15 billion and are used to provide services to over 3 million people as well as a range of commercial and industrial customers (NCC 1999). The water and wastewater businesses of 91 of the State's 125 local governments are applying CoAG reform (QCA 2001). These businesses vary significantly in terms of size, customer base and services provided.

Four urban water boards provide bulk water services to local government retail and distribution services:

- the South East Queensland Water Corporation (which trades as SEQWater), a Corporations Law company, is jointly owned by the State and 12 local governments;
- the Gladstone Area Water Board and Mount Isa Water Board are State-owned and were commercialised under the *Water Act 2000*; and
- on 30 June 2001, the Townsville-Thuringowa Water Supply Board was converted to a joint local government entity under the *Local Government Act 1993*.

These businesses also provide bulk water directly to industrial customers. The State's rural water business, SunWater, also supplies some bulk water to local governments, industrial customers and electricity generators.

Full cost recovery

Governments agreed to set prices so water and wastewater businesses earn sufficient revenue to ensure their ongoing commercial viability but avoid monopoly returns. To this end governments agreed that prices should be set by a jurisdictional regulator (or its equivalent) to recover:

- at most the operational, maintenance and administrative costs, externalities, taxes or tax-equivalent regimes, the cost of asset consumption and cost of capital, the latter being calculated using a weighted average cost of capital; and
- at least, the operational, maintenance and administrative costs, externalities, taxes or tax-equivalent regimes (not including income tax), the interest cost on debt and dividends (if any), and make provision for future asset refurbishment/replacement. Dividends should be set at a level that reflects commercial realities and stimulates a competitive market outcome.

Asset values should be based on the deprival methodology unless an alternative approach can be justified and an annuity approach should be used to determine medium to long term cash requirements for asset replacement/refurbishment. Governments can still provide assistance to special needs groups through CSOs but this should be done in a transparent way (clauses 3a, b and c).

Queensland arrangements

Retail and distribution water and wastewater services

Amendments to the *Local Government Act 1993* in 1996 and 1997 provided the foundations for Queensland's approach to applying CoAG pricing principles to local government retail and distribution services. These amendments provided a three-tiered framework whereby local governments are identified as those with type one and type two activities and other local governments. Type one water and sewerage businesses are those with a turnover in excess of $28.7 million per year, while type two water and sewerage businesses have a turnover in excess of $8.6 million per year. Queensland's 2001 NCP annual report stated that those local governments with type one and type two businesses (referred to as the big 18) account for 80 per cent of current expenditure on urban water and sewerage services, 80 per cent of water connections and 85 per cent of total urban revenue.[1]

The *Local Government Act 1993* requires local governments with type one and type two water and sewerage businesses to complete public benefit assessments regarding the implementation of full cost pricing and two-part tariffs, and to make resolutions regarding the recommendations of these assessments. The remaining local governments are not legislatively required

[1] The big 18 comprises; Brisbane, Caboolture, Cairns, Caloundra, Gold Coast, Hervey Bay, Ipswich, Logan, Maroochydore, Mackay, Noosa, Pine Rivers, Redlands, Rockhampton, Thuringowa, Toowoomba, Townsville and Bundaberg.

to complete these assessments, although the adoption of CoAG water pricing reforms is encouraged through the voluntary Code of Competitive Conduct and the Local Government NCP Financial Incentive Package. The Queensland Government and Local Government Association of Queensland is also providing training and assistance to support and encourage adoption of water reforms. The Queensland Competition Authority monitors progress and recommends payments under the financial incentive package.

In assessing urban services, the Council has supported the State's initial focus on the big 18, given that focusing on reform in these local governments is likely to deliver the greatest immediate return to the State. However, the Council has also looked for evidence of appropriate reform progress beyond the big 18, particularly among the next largest 10 local governments (those with more then 5000 connections). Acknowledging that the benefits of reform for very small local governments are unlikely to be great relative to the costs, the Council has not considered those services with fewer than 1000 connections.

Big 18

Queensland states that the pricing requirements of commercialisation and full cost pricing under the *Local Government Finance Standard 1994* (see box 2) equate to the upper bound of the CoAG pricing guidelines. The Queensland 2001 NCP annual report noted that 13 of the big 18 were commercialised and the remaining five local governments have implemented full cost pricing.[2] Details on cost recovery among the big 18, including information on depreciation/renewals annuities, tax-equivalent regimes and dividends is provided in attachment 2 of Volume 2 of Queensland's 2001 NCP annual report.

[2] In addition to full cost recovery, commercialisation requires: specification of clearly defined commercial objectives and performance targets with performance monitoring being carried out by the local government; proper costing and transparent funding of CSOs; the transfer of regulatory and policy functions to the parent local government; management autonomy combined with higher accountability; and the introduction of purchaser-provider arrangements between the business activity and the parent local government (Queensland Treasury 1998).

Box 2: Local Government Finance Standard 1994 – full cost pricing

Full cost pricing – local governments must ensure the projected total revenue from carrying on the activity is enough to cover the projected total costs of carrying on the activity for the council's financial year. This means all relevant costs must be appropriately identified and prices must be set to cover all of these costs.

Asset valuation – non-current assets must be valued at deprival value by 30 June 1999.

Asset consumption – depreciation of an asset used in carrying on an activity must be based on the deprival value of the asset allocated over its useful life. Nonetheless, a local government may decide not to base depreciation of an asset on its deprival value allocated over its useful life, but to use an amount decided by the local government to be appropriate in the circumstances (for example, consumption based depreciation, renewals annuity).

Rates of return – pricing must include a return on capital comparable to that of a private sector entity carrying on a similar.

Debt – local governments must have regard to the split between equity and loan capital and the return appropriate on each. This includes consideration on an appropriate debt neutrality fee.

Taxation – taxes that would be payable if the business was not carried out by a local government should be accounted for by an amount equivalent to the tax.

Note: For further information regarding application of full cost pricing see Department of Communication and Information, Local Government, Planning and Sport (2000a and 2000b).

Source: Queensland (2001a)

Services with more than 5000 connections outside the big 18

Queensland chose to make full cost recovery voluntary for to local governments outside the big 18. Further, Queensland's definition of full cost recovery for local governments outside the big 18 does not include competitive neutrality adjustments such as taxes or tax-equivalent payments. Queensland considered that these activities, because they have not been classified as 'significant business activities' for the purposes of competitive neutrality reform under clause 3 of the Competition Principles Agreement, are not required to consider competitive neutrality adjustments.

When the Council last assessed progress, in June 2000, Queensland advised that local governments with more than 5000 connections outside the big 18 would consider full cost pricing over 2000-01 with a possible implementation date of 1 July 2001.

Queensland's 2001 NCP annual report noted that of this group:

- Mount Isa implemented full cost pricing on 1 July 2000;
- Beaudesert and Livingstone are due to implement full cost pricing by 1 July 2001;
- Warwick is phasing in full cost pricing;

- Redcliffe is completing a fresh assessment of the application of full cost pricing;
- Burdekin and Cooloola are yet to make a decision regarding the application of full cost pricing; and
- Gladstone, Maryborough and Johnstone resolved not to implement full cost pricing.

Services with 1000-5000 connections

In relation to the 42 local governments with greater than 1000 but less than 5000 connections the Queensland 2001 NCP annual report noted that:

- two local governments implemented full cost pricing;
- 11 resolved to implement full cost recovery, using a phased-in approach in some cases;
- seven local governments are reviewing the implementation of full cost pricing;
- three local governments are considering the implementation of full cost pricing for 2002-03;
- 13 are yet to make a decision regarding full cost pricing; and
- seven decided to remain under their existing arrangements.

Queensland also stated that a survey undertaken by the Department of Local Government and Planning indicated that many local governments, while not formally resolving to implement the code of competitive conduct, have the following elements in their existing pricing arrangements:

- the identification and recovery of indirect and direct costs;
- the allocation of administrative and overhead costs;
- the valuation and depreciation of assets on the written-down replacement cost;
- a rate of return on capital; and
- some identification of CSOs.

Promoting reform beyond the big 18

A recent survey by the Local Government Association of Queensland found that local governments outside the big 18 had accessed less of the money from the local government NCP financial incentive package than expected because of:

- insufficient in-house resources to focus on process and implementation;
- limited understanding of the extent to which reforms had already been completed;
- concern (mainly among the smaller local governments) that the NCP bonus payment may not cover the costs of engaging consultants and implementing reforms; and
- limitations of in-house financial systems (particularly the capacity to calculate full cost pricing).

In response to the above, the Local Government Association of Queensland and the State Government developed and endorsed a strategy, the Business Management Assistance Program, to:

- focus on full cost pricing, given that this has been the area of greatest difficulty for smaller local governments (although assistance will also be provided for designing tariff structures to implement two-part tariffs);
- enhancement of in-house capability by:
  - discussing impediments to individual local governments' commitment to, and progression of reform;
  - establishing a help desk and mentoring service to assist the implementation and assessment of reform;
  - developing training materials that emphasise improved managerial skills and internal management systems, with NCP compliance achieved as a byproduct; and
  - developing a comprehensive checklist to assist local governments to maximise their eligibility for local government NCP financial incentive package payments; and
- extension of the deadline for receipt of incentive payments from 30 June 2002 to 30 June 2003. However, the extension will be available to only those local governments that have formally resolved before 30 March 2002 to implement reform and provided the State with an implementation strategy and timetable. It is also proposed that the incentive payments be used to assist local governments to secure the maximum possible payments.

Bulk water

Table 1 is a summary of performance against the upper bound of the CoAG guidelines. Except for SEQWater, all results are before commercialisation.

Table 1: Urban water boards' operating results, 1999-2000

	Total revenue $m	*Expenses $m*	*EBIT[b] $m*	*Interest $m*	*Tax[c] $m*	*Dividend $m*	*Assets $m*	*Rate of return %*
SEQWater[a]	7.730	4.453	3.277	3.927	-0.479	-	397	N/A
Gladstone Area Water Board	12.672	10.434	2.238	2.208	-	-	165	1.36
Townsville Thuringowa Water Supply Board	17.252	13.257	3.995	0.407	-	-	178	2.24
Mount Isa Water Board	5.422	4.679	0.743	-	-	-	65	1.14

[a] For the period 18 March 2000 to 30 June 2000.
[b] EBIT= earnings before interest and tax.
[c] Tax or tax equivalent payments
Source: Queensland (2001a)

The State's rural water service provider, SunWater also provides some urban bulk water services to local government water businesses. As noted in SunWater's corporatisation charter, prices for local government water users are to be set at fully commercial rates, covering the operating, maintenance, renewals and refurbishment, tax and interest costs as well as including a commercially based return on the capital invested in the scheme. The Council notes, however, that existing contractual arrangements will be retained until they expire.

Queensland's 2001 NCP annual report noted that SunWater and local governments, when negotiating new contracts, are to give regard to the following principles under the SunWater Corporatisation Charter:

- prices are to be based on efficient costs of service delivery, recognising the balance between service standards and prices;
- prices are to reflect a commercial rate of return on assets which are to be valued according to the optimised depreciated replacement cost;
- revenues received from local government in schemes where assets are shared are not to cross-subsidise non-urban users;
- prices are to recognise the existence of contributed assets so there is no double counting of the asset returns;

- in keeping with irrigated agricultural pricing, the transition of existing contracts into fully commercial pricing including a return on capital is to take no more than five years;

- the SunWater Board must seek the approval of shareholding Ministers to extend the transition period beyond five years, including seeking any continuing CSO for supply to local government where a case for hardship is made; and

- the Queensland Competition Authority is to be the independent arbiter in cases of any dispute in the negotiation process.

While SunWater's Corporatisation Charter states that existing contracts will be honoured. Nonetheless, SunWater is intending to renegotiate contracts in accordance with full commercial practice where the opportunity arises.

Discussion

Big 18

Available information suggested that broadly speaking Queensland's large water and wastewater businesses continue to comply with the principle of full cost recovery. The Queensland Competition Authority supported this view stating that 'substantial progress has been achieved by many larger councils in relation to the application of full cost pricing' (QCA 2001, p.3).

The Queensland Competition Authority also noted that the larger local governments applied reforms to most activities and are addressing more complex issues such as optimisation, contributed assets, CSOs and cross-subsidies.

While the Council acknowledges the progress among the big 18 overall, there are some issues of detail that may need to be addressed in the future. First, the information provided indicates that Maroochy earned a 12.9 per cent return on assets in 1999-2000.

The Council also noted that dividends paid by wastewater activities in Toowoomba were almost one and a half times the entity's before-tax earnings. These results could reflect problems with pricing for Maroochy, or a risk that assets are being run down, in the case of Toowoomba.

However, in both of the above cases the Council acknowledges that these activities – together with the water and wastewater businesses provided by the rest of the big 18 – have been declared as monopoly businesses and notes the possible referral to the Queensland Competition Authority for prices oversight. The Council supports the independent prices oversight by of such large monopoly businesses as a means of ensuring that the services provided to customers represent value for money and are financially sustainable.

Other water and wastewater services

By contrast to the progress among the big 18, for which consideration of reform is compulsory, progress among medium and smaller local governments has been more limited. The Queensland Competition Authority suggested less than 5 per cent of all water and wastewater services outside the big 18 have implemented sufficient reform to be paid more than 75 per cent of their maximum entitlements under Queensland's financial incentive scheme (QCA 2001). Further, only around 55 per cent achieved sufficient progress to receive any payments at all.

Services with more than 5000 connections outside the big 18

Information provided in Queensland's 2001 NCP annual report suggested that five water businesses and seven wastewater businesses now earn sufficient revenue to recover all elements of the CoAG guidelines lower bound, except tax-equivalent payments. Of the local governments in this group that did not recover the lower band for either water or wastewater services in 1999-2000:

- Mount Isa will apply full cost pricing from 1 July 2001;
- Redcliffe is undertaking another assessment of full cost pricing;
- Burdekin and Cooloola are yet to make a decision; and
- Johnstone decided not to apply full cost pricing.

The Council welcomes the Mount Isa's decision to apply full cost pricing. The Council also anticipates that the Local Government Association of Queensland and the State Government will, as a priority, work with Redcliffe, Burdekin and Cooloola to ensure they have sufficient information to make a decision before the Council's next NCP assessment in 2002. Where the benefits of implementation are greater than the costs, the Council will look for full cost recovery to be applied (with any appropriate phasing) from 1 July 2002. The Council will look for the Business Management Assistance Program to promote CoAG pricing principles among smaller local governments to assist local governments like Johnstone to improve its financial performance. The issue of provision for tax-equivalent payments is discussed further below.

Services with more than 1000-5000 connections

In May 2000 Queensland reported that five local governments would implement full cost pricing from July 2001, 34 were considering implementation and 13 were not considering full cost pricing (although seven of these were already at the lower bound of the CoAG guidelines). A little over twelve months later Queensland advised the Council that 13 had implemented or will implement or phase full cost pricing from 2001, 26 were

reviewing the issue or yet to make a decision and six were retaining their current arrangements.

The Council welcomes the recent decisions by local governments such as Bowen, Gatton, Esk, Wondai and Murgon to implement full cost pricing. However, progress in other areas is slow. In May 2000 both Whitsunday and Cloncurry had committed to implement full cost recovery on 1 July 2000 but more recent advice suggests that no decision has been made. The Council has not received advice as to the reason for this change.

Information provided suggested that 11 local governments earned a negative return on assets in 1999-2000 for their water and/or wastewater businesses. Five of these governments decided to implement full cost recovery (including Chillchilla which had the lowest of the reported wastewater returns, -10.8 per cent), four are still reviewing or have not made a decision, and two will remain under current arrangements. The Council anticipates that the Business Management Assistance Program for assisting the application of CoAG pricing principles will lead to improved performance by smaller local governments. The Council will look for evidence to this effect when it assesses performance in 2002.

Other retail and distribution issues

Externalities

Queensland advised that the *Water Act 2000* will require all water service providers that operate bulk infrastructure such as dams to comply with a resource operations licence which outlines the environmental requirements (among others) for the operation of bulk infrastructure. The water service providers are to meet the costs of compliance with the licence (and thus include those costs in water prices). The extent to which charges reflect the resource management costs of bulk infrastructure depends on the extent to which individual infrastructure owners and water and wastewater service providers pass on these costs.

Assistance with capital works to address the environmental impacts of urban water use is an objective of the State Government's local governing bodies capital works subsidy scheme. The Council understands that the scheme involves the State, through the Department of Local Government and Planning providing direct subsidies to local governments for approved capital works. The details of this scheme are discussed in the section on CSOs, but the Council has been advised that since 1996 much of the 40 per cent subsidy has been allocated to assist local governments upgrade existing sewage treatment facilities to meet nitrogen phosphorous removal standards under the *Environmental Protection (Water) Policy 1997*. Queensland notes that reducing nitrogen phosphorus levels in treated effluent is particularly an issue for local governments along the Queensland coastline, because many have an impact on the Great Barrier Reef.

In considering CoAG's requirement of provision for externalities, the Council notes that consideration of this issue is in its early stages in most jurisdictions. As a first step the Council has looked for prices to reflect an appropriate proportion of the costs of mitigating the environmental problems arising from water use. The Council notes that pricing is only one aspect of a holistic approach to externalities. Other ways of approaching the problem include Governments establishing some form of property rights over the environment and establish environmental allocations or contingencies.

Given implementation of the Water Act 2000 is at an early stage, the Council suggests that current Queensland arrangements have yet to take these factors fully into account. The Council will look for further consideration of externalities when it reviews Queensland's progress in the 2002 NCP assessment.

Taxes and tax-equivalent payments

The Council will continue to assess Queensland's progress in this matter over the next twelve months.

Bulk water services

The Council notes that the reported results for Gladstone Area Water Board, Townsville—Thuringowa Water Supply Board and Mount Isa Water Board apply to the period before commercialisation and thus, under Queensland arrangements, competitive neutrality requirements such as tax-equivalent payments are not required. The Council will look for these three boards to make appropriate competitive neutrality adjustments and commercial rates of return when it assesses progress in 2002.

Assessment

Retail and distribution services

Queensland's largest 18 local governments made significant progress in reforming retail and distribution services and these services are expected to be subject to prices oversight by the Queensland Competition Authority. Therefore, the Council is satisfied that Queensland made sufficient progress for the 2001 NCP assessment.

The Council is concerned at the slow progress being made by local governments outside the big 18 although the Business Management Assistance Program is likely to encourage further progress.

The Council's view is that the Business Management Assistance Program for assisting smaller local governments demonstrates a genuine commitment by both the Queensland Government and the Local Government Association of Queensland to progress full cost recovery reform among local governments where it is likely to yield a net benefit. However, in assessing future performance, the Council must focus on the outcomes actually achieved. Therefore, the Council will look for evidence of actual reform outcomes, such that wherever possible local government services earn sufficient returns to guarantee the ongoing viability of their water and wastewater businesses. The Council also notes that progress in this area is significantly beyond the original timeframe envisaged for completing urban water reform.

In addition to looking for evidence of progress among smaller local governments, the Council will also look for progress, where appropriate, by local governments outside the big 18 in considering for externalities and including taxes or tax equivalents within cost recovery targets.

Bulk water services

The Council is satisfied that Queensland has met its 2001 NCP commitments in regard to urban bulk water cost recovery, but will look for effective application of commercialisation requirements in the NCP assessment in 2002.

Consumption-based pricing

Governments endorsed the principle that prices should reflect the volume of water supplied so prices encourage more efficient water use and to give customers more control over the size of their water bill. For urban water providers using surface water or groundwater, two-part tariffs (comprising a fixed access component and a volumetric cost component) are to be introduced where cost effective (clauses 3a and b).

Queensland arrangements

Retail and distribution water charges

Big 18

Queensland advised that 17 of the big 18 local governments have, or are intending to, implement two-part tariffs. The only remaining local government is Townsville. On 26 June 2001, Townsville endorsed:

1. the implementation of a two-part tariff be continued for the non-residential sector, through the adjustment to the current user pays tariff as outlined in this report;

2. a two-part tariff not to be implemented for the residential sector for the following reasons:

   - the benefit cost ration is below breakeven due mainly to the high level of fixed costs that comprise the Citiwater budget;

   - major reductions in demand that may be expected to result from the high price increases in the middle and high user group of the residential sector, will significantly impact on the corporate vision of greening Townsville. This policy has community support and provides for improvement of the amenity and visual aesthetics of the city;

   - further investigation is required to determine a tariff and transitional arrangement that will mitigate the expected high level of impact on the customer group using from 500 to 800 kilolitres per annum. Such impacts range from 20 to 75 per cent and will affect around 45 per cent of the customers;

   - the reduction of water use is not a major driver for Townsville Citiwater as there are limited benefits from reduced water usage. In fact, the disincentive for reducing water use is high and such an outcome would force prices to rise further due to the high level of fixed costs; and

   - the stability of revenue is of concern due to the unknown level of initial impact on demand resulting from the price increases. It is estimated

that the impact should be less than 10 per cent however, estimation of such impacts is difficult and inaccurate as there are many variables.

3. Further, that a committee be formed to review, in detail, the impacts of the pricing changes with respect to the issues outlined above.

The Council is concerned at the way Townsville continually delays full consideration of this issue. This is the second time Townsville has decided to re-review the cost effectiveness of two-part tariffs without providing either the council or its community with a full public justification of why an ongoing delay is in the public interest.

The tariff structures of all big 18 local governments are included in attachment 1 of Queensland's 2001 NCP annual report.

Services with more than 5000 connections, outside the big 18

Queensland's 2001 NCP annual report stated of the 10 largest local governments after the big 18:

- Warwick already has a two-part tariff for its domestic and commercial/industrial customers;
- Beaudesert, Burdekin, Livingstone and Redcliffe are working on an implementation date of 1 July 2001;
- Cooloola and Johnstone have resolved to undertake a fresh two-part tariff review. Cooloola has since resolved to implement two-part tariff arrangements from 2002-03;
- Gladstone resolved to implement two-part tariffs on 1 July 2002; and
- Maryborough and Mount Isa undertook a two-part tariff assessment, although the assessment showed that the implementation of two-part tariffs would not be cost effective.

Attachment 5 of Queensland's 2001 NCP annual report outlines the tariff structures used by each of the above local governments.

Services with more than 1000 connections

In relation to the 42 local governments with more than 1000 but less than 5000 connections the Queensland 2001 NCP annual report noted that:

- 16 local governments (38 per cent of this group) already have a two-part tariff in place;
- a further 19 local governments (45 per cent) undertook a two-part tariff assessment, of which:

  - six indicated they will implement two-part tariffs;
  - three are completing further investigations of the implementation of two-part tariffs;
  - seven local governments found the implementation of two-part tariffs would not be cost effective;
  - three resolved not to implement two-part tariffs; and
- seven local governments indicated that they will continue with their current arrangements.

Wastewater charges

Queensland's 2001 NCP annual report suggested that domestic and commercial/industrial wastewater charges levied by the State's local government providers are based on either a fixed charge or a fixed charge with an additional charge for each additional pedestal.

The Council was advised that for trade waste Brisbane Water's charges are made up of charges for the quantity of trade waste output and additional charges according to the quality of the trade waste. The quantity charge applies to traders with discharge in excess of 250 kilolitres each year. Traders with discharge of under 250 kilolitres pay a fixed charge of $193 each year. For larger discharges the trade waste charge is between $0.76 per kilolitre and $0.39 per kilolitre depending on total volume. Solids are charged per kilogram.

The Council understands that some other local governments also levy trade waste charges but no details of these charges have been provided.

Bulk water charges

Queensland stated that all four urban water boards charge for water consistent with the principles of volumetric charging (see Table 2).

Table 2: Queensland bulk water charges, 1999-2000

Provider	*Charge*
South East Queensland Water Board	Local government customers are charged on the basis of a single volumetric tariff in accordance with a formula contained in Bulk Water Supply Agreements that commenced in 1996.
Gladstone Area Water Board	Eighty per cent of water provided by Gladstone Area Water Board is to industrial customers under long-term contracts. Water charges included in contracts are volumetrically based and include a `take or pay' arrangement. Local government customers are charged per megalitre.
Townsville—Thuringowa Water Supply Board	Local government customers (95 per cent of total water supply) are charged a single volumetric charge.
Mount Isa Water Board	The Mount Isa Water Board charges for water on the basis of a two-part tariff arrangement.

Source: Queensland (2001a)

As discussed above SunWater bases its bulk water charges on commercial principles including volumetric charging where cost effective.

Discussion

Retail and distribution water charges

Big 18

Since the Council's second tranche NCP assessment Pine Rivers, Rockhampton and Bundaberg have all committed to introducing two-part tariffs.

The Council recognises that the benefits from two-part tariffs in stimulating more economical water use and deferring investment are likely to be the greatest for the largest service providers. Therefore, it is concerned about the lack of progress by Townsville, one of Queensland's largest local governments.

In June 2000 the Council recommended that 5 per cent (or $4.3 million) of Queensland's payments be withheld as a result of the lack progress Townsville and two smaller local governments. This suspension was lifted in January 2001 when Townsville argued to bring forward formal resolution of this matter to June 2001.

Since then the Queensland State Government has been proactive in progressing reform at all levels of local government. The Business Management Assistance Program, designed to assist small local governments to implement reform is a good example of this. The State Government has also worked with larger local governments, including Townsville, to encourage a rigorous approach to considering water reforms.

However, the Townsville Council has failed to demonstrate that it has objectively analysed the cost effectiveness of two-part tariffs and provided a public interest justification on why it will not implement price reforms. The Council acknowledges Townsville's decision to establish a committee to review issues relating to the implementation of two-part tariffs. However, the Council is seeking demonstrated progress on implementation (if cost effective), not ongoing commitments to ongoing reviews.

In regard to Thuringowa, while the Council notes it introduced its WaterWatcher plan for commercial and domestic customers, it continues to retain its standard plan, which includes free water allowances of 768 kilolitres and 522-3000 kilolitres for domestic and commercial customers respectively. Queensland advised that 1000 of 16 000 households are on a two-part tariff and that the modest uptake is due to the following factors:

- the first notices to customers of the new tariff system were provided with half yearly accounts sent in December 2000. The next accounts will be provided at the end of June 2001 to offer further incentives;

- A meter replacement program was incomplete, but was accelerated to give customers more confidence in their water use and expected payments, and is now complete;

- As originally planned, the access charge will fall further in the second year to accelerate uptake; and

- Thuringowa anticipated, based on charges for 2001-02, that around 50 per cent of households will be better off under a two-part tariff. The Council also understands that the migration result for 2000-01 is in line with the original target of minor migration in the first year, 50 per cent in the second year and 80 per cent in the third year.

The Council is satisfied that wastewater charges are consistent with NCP requirements, but will further consider the issue of trade waste charges at the NCP assessment in 2002.

Services with more than 5000 connections, outside the big 18

Prior to its June 2000 supplementary assessment, the Council was advised that seven of the 10 local governments in this group were considering two-part tariffs with a possible implementation date of 1 July 2001. Warwick already had two-part tariffs in place. Information provided in Queensland's 2001 NCP annual report suggested that all seven completed assessments, with six deciding to introduce two-part tariffs and two finding that introducing two-part tariffs would not be cost effective. The Council welcomes the progress achieved by these local governments. It is satisfied that Queensland has met 2001 NCP commitments for water and wastewater prices among these local governments. It will look for continued progress in water pricing and trade waster charges in 2002.

Services with 1000 to 5000 connections

The Council's last assessment of this issue noted that 16 of the 42 local governments in this group had implemented two-part tariffs and that a further 20 would consider implementation during 2000-01, with a possible implementation date of 1 July 2001. Now 21 local governments have introduced two-part tariffs. The Council also understands that six of the 20 listed as considering implementation plan to proceed with introduction, while two found two-part tariffs would not be cost effective.

The Council is concerned that seven local governments decided to remain under existing tariff arrangements without completing assessments of the cost effectiveness of introducing two-part tariffs. The Council hopes that the Business Management Assistance Program will lead to these assessments being completed, to allow an informed judgement of the potential value of moving to a two-part tariff. The Council's concern is heightened by the fact that these seven local governments have some of the State's largest free water allowances; for example, Longreach, Sarina and Belyando offer allowances of up to 1200 kilolitres, 2045 kilolitres and 6655 kilolitres respectively. Free water allowances, particularly of this magnitude, given that average residential consumption across the country is around 256 kilolitres (WSAA 2000), discourage economical water use. The Council is satisfied that wastewater charges are consistent with CoAG 2001 NCP requirements. The Council will further consider the issue of trade waste charges at its next assessment.

Assessment

The Council notes that 17 of the big 18 local governments will implement two-part tariffs, resulting in most of the state's urban water users facing a clear volumetric signal that encourages more efficient water use.

However, two years have passed since the Council first expressed its concerns in regard to Townsville and these matter are still to be resolved. Consequently the Council has recommend a permanent reduction in Queensland's competition payments of $270 000 from 2001-02. This amount reflects an approximation of the remaining money Townsville is entitled to through the Queensland Government's Financial Incentives Package. The Council has chosen this approach to reflect that the Queensland Government has proactively encouraged reform, where it is in the public interest. However, Townsville has failed to assess objectively the cost effectiveness of two-part tariffs, consistent with the NCP obligations.

The Council will reconsider Townsville's approach to two-part tariffs in its 2002 NCP assessment. It will look at both the progress made by Townsville and the Government's efforts to resolve the issue. At that time the Council will reconsider whether a continued reduction in competition payments is warranted and the appropriate size of any such reduction.

Community service obligations

Where service deliverers are required to provide water services to classes of customers at less than full cost this cost should be fully disclosed and, ideally, paid to the service deliverer as a CSO. Governments agreed that the Council would not make its own assessment of the appropriateness of any individual CSOs, but would review information provided by governments in totality to ensure these CSOs do not undermine the objectives of the agreed water reform framework (clause 3a).

Queensland arrangements

The second tranche NCP assessment outlined the legislative provisions relating to CSOs in the *Local Government Act 1993*. As noted in that assessment, only businesses within the big 18 are required to identify and report their CSOs. attachment 3 in Queensland's 2001 NCP annual report lists the CSOs delivered by the big 18 local governments through their water and wastewater businesses. CSO information is reported and publicly available via the relevant local government's budget reports.

The Council also understands that the State funds a CSO to alleviate the impact on pensioners of local government rates and charges. The Queensland Government pays the subsidy to all local governments, to be passed on to approved pensioner ratepayers. The rebate for each approved pensioner is 20 per cent of the gross rates and charges, up to a maximum of $180 per year. The bulk of the rebate is towards local government rates, while pensioners whose total charges are less than $900 per year also receive a rebate towards their water and sewerage charges. Queensland advised that the total expenditure for the State subsidy under the scheme was about $38 million in 1999-2000.

Queensland also provides assistance to the local government water and wastewater businesses via the Local Governing Bodies Capital Works Subsidy Scheme. Queensland advised that the stated aim of the scheme is to provide appropriate assistance towards the establishment and extension of public works in all areas of the State. Other objectives include to:

- provide financial assistance to bodies in a fair and equitable manner to secure capital infrastructure necessary for the welfare of the community and economic development;

- provide assistance to bodies to upgrade water supply and sewerage infrastructure to meet higher environmental standards;

- encourage the beneficial re-use of wastewater;

- provide a greater incentive for local governments to construct new water and sewerage infrastructure, while keeping the payment required from ratepayers to a minimum; and

- allow for greater local employment opportunities, while providing a service to people using high standards of environmental protection.

In pursuit of these objectives a standard percentage rate of subsidy is paid on the capital cost water and wastewater works undertaken by local governments (see Table 3).

Table 3: Local governing bodies' capital works subsidy scheme

Expenditure type	*Percentage of capital cost contributed by State Government (%)*
Water supply (source of supply and treatment)	40
Sewage or common effluent drainage (treatment and post-treatment disposal)	40
Wastewater re-use (post treatment costs) (although not to subsidise re-use for private or commercial gain)	50
Public toilets and amenity blocks	20
Swimming pools	10
Flood mitigation	20

Source: Queensland (2001a)

Since 1996-97 the Government has paid $104.9 million from the 40 per cent water and sewerage subsidy and $9.46 million from the 50 per cent re-use subsidy. The current subsidy scheme is due to expire in 2005-06. Funds under the subsidy scheme are available to all providers (both government and non-government) of water or wastewater services for urban areas. For a non-local government service provider to qualify for funds from the subsidy scheme, the provider must demonstrate that the service is to be used for an urban areas (or a percentage is to be used in an urban area) and have a long term contract with the relevant local government for the supply of services.

Queensland advised that no CSOs have been identified for the State's urban water boards.

Discussion

The Council notes that CSOs provided by big 18 water and wastewater businesses were transparently reported.

Assistance of up to 40 per cent of capital investment through the local governing bodies capital works subsidy scheme could have a significant impact on adherence to the principle of full cost recovery. However, the Council does not challenge the Government's objectives of providing equitable access to water and wastewater services and achieving more sustainable water use. This is particularly the case where the investments lead to benefits beyond the local government boundary, such as the protection of the Great Barrier Reef. The amount provided under the scheme is transparently

reported in the State Budget and the budgets of the recipient local governments and, therefore, complies with CoAG requirements.

Assessment

The Council is satisfied that Queensland has met 2001 NCP commitments in relation to the CSOs of the big 18. In regard to smaller local governments, the Council will look for progress in the identification and transparent reporting of CSOs when it assesses performance in 2002.

Cross-subsidies

Cross-subsidies should be transparently reported and, ideally, removed where they are inconsistent with efficient service provision and use (clause 3a).

Queensland arrangements

As outlined in the second tranche NCP assessment, type one and type two businesses are required to identify and disclose cross-subsidies by 1 July 2000. Queensland developed guidelines and a set of case studies to assist this process (also see 1999 second tranche NCP assessment). Attachment 4 of Queensland's 2001 NCP annual report lists cross-subsidies identified by the big 18 for 1999-2000.

Discussion

The Council notes that the big 18 local governments have met 2001 NCP commitment in relation to cross-subsidies.

However, as with its assessment of compliance with CSO commitments, the Council is concerned at the lack of consideration given to this commitment by smaller local governments. The Council's concern is heightened because high free water allowances offered by some local governments outside the big 18, provide significant scope for cross-subsidies between low-volume and high-volume users. The Council suggests that the strategy developed by the Local Government Association of Queensland and the State Government to transparently report water prices and CSOs could be a means of addressing this issue.

Assessment

The Council is satisfied that 2001 commitments have been met but will look for further progress among those local governments outside the big 18 in its next assessment.

Rural water services

For the purpose of assessing water pricing (clause 3 of the agreed framework), the Council has defined the rural supply sector to include all water supply services other than those supplied to urban or non-metropolitan urban customers. A broad definition has been adopted to achieve a comprehensive application of pricing reform across the Australian water and wastewater industry. Under this definition CoAG rural water pricing commitments apply to such activities as:

- services provided by government-owned irrigation schemes and government-owned bulk water supply services to users in non-urban areas such as private irrigation schemes, power stations or processing and mining plants; and

- license fees set for commercial users extracting surface water or groundwater using their own infrastructure.

In Queensland, irrigation accounts for 65 per cent of total water use while stock and domestic, industry (including mining) and power generation represent 14 per cent, 3 per cent and 1 per cent of total use respectively.[3]

SunWater, a Government-owned corporation, is the State's largest water service provider, accounting for nearly 50 per cent of all water consumed in the State (Queensland 2001a) and 40 per cent of the water used for irrigation. SunWater also provides nearly all of the water for power generation, much of the water for mining and a small amount of bulk water used by urban providers. Annual charges also apply to water licences in some unregulated areas, water harvesting in regulated areas and extraction in groundwater management areas.

3 Urban use accounts for the remaining 17 per cent.

Full cost recovery

Governments agreed to set prices so water and wastewater businesses earn sufficient revenue to ensure their ongoing commercial viability but to avoid monopoly returns. To this end governments agreed that prices should be set by a jurisdictional regulator (or its equivalent) to recover:

- at most the operational, maintenance and administrative costs, externalities, taxes or tax-equivalent payments, cost of asset consumption and cost of capital, the latter being calculated using a weighted average cost of capital; and
- at least, the operational, maintenance and administrative costs, externalities, taxes or tax-equivalent payments (not including income tax), the interest cost on debt and dividends (if any) and make provision for future asset refurbishment/replacement. Dividends should be set at a level that reflects commercial realities and stimulates a competitive market outcome.

Asset values should be based on the deprival methodology unless an alternative approach can be justified, and an annuity approach should be used to determine medium to long term cash requirements for asset replacement/refurbishment. Governments can still provide assistance to special needs groups through CSOs but this should be done in a transparent way (clauses 3a, d and e).

Queensland arrangements

SunWater

Queensland's history of heavily subsidising water prices for irrigation has meant that some significant increases will be required to achieve even the bottom of the price band set by the CoAG guidelines. Some schemes are recovering, for example, less that 20 per cent of marginal cost. Queensland adopted a two-pronged approach to move the government-owned schemes managed by SunWater to a position of cost recovery. First, SunWater is required to improve its efficiency and reduce costs by 15 per cent before 2004. Second, a five-year price path for 25 of SunWater's 27 schemes was developed in consultation with scheme participants (see attachment 1).

Cost savings through more efficient service provision

In reviewing SunWater's cost, the State Government's independently audited cost information to provide a reliable base for further analysis. These costs were then benchmarked. This led to the following cost reduction targets:

- a 33 per cent reduction in overheads from $8.5 million to $5.7 million;
- a 25 per cent reduction in operating and maintenance service costs, from $32.9 million to $24.7 million; and
- a 14 per cent reduction in business management costs, from $9.4 million to $8.1 million.

In addition, the following costs were included in the analysis to ensure compliance with the CoAG guidelines:

- a renewals annuity ($9.33 million per year);
- resource management compliance costs/externality costs ($900 000 per year);
- insurance costs;
- interest costs; and
- taxes or tax-equivalent payments.

Provision for the cost of servicing recreational facilities was also included in total cost estimates (with $100 000 per year of the $1 million total cost being passed on to customers over the five-year life of the price paths), recognising that a minimum level of dam site costs is obligatory regardless of the recreational use. SunWater will consider further options for the future funding of these activities but will continue to meet these costs as a 'good corporate citizen'.

Price paths

Queensland stated that setting the price paths for each scheme involved:

- projecting scheme revenues, taking into account future demand estimates based on historical average water use with allowances for changing cropping patterns, water trading, sales of additional allocation, and the impact of different tariff structures;

- analysing the economic impacts, looking at the effect of higher prices on irrigators with a view to identifying 'speed limits' for price increases;[4] and

- consulting over an 18-month period with local government, industry, peak bodies and irrigators.

The price paths will result in nine schemes (53 per cent of total nominal allocations) recovering at least the bottom of the lower bound by 2001. The timetable provided by Queensland also suggested that 87 per cent of water provided by Government-owned schemes will be recovering by 2004 an amount to ensure the ongoing viability of the scheme.

In regard to the above categories:

- category 1 schemes are defined as those that recover in excess of 80 per cent of the lower bound and that will achieve cost recovery by 2001;

- category 2 are those that recover 50 to 80 per cent of the lower bound but that should be able to recover the lower bound by 2004;

- category 2A schemes are those that (a) would have otherwise been category 3 but, given extra time, should achieve the lower bound and (b) those that were given a 'softer start' due to financial difficulties faced by many sugar and dairy producers; and

- category 3 schemes are those that recover less than 50 per cent of the lower bound and that are unlikely to achieve the lower bound without 'extreme financial hardship'. A target of at least 50 per cent cost recovery by 2004 was set for this group.

The Council has been advised that price paths are still to be finalised for a number of very small schemes, including the Bowen–Broken scheme. Similarly price paths for the Callide Valley scheme and the Pioneer Valley Water Board supply agreement are being finalised.

Other rural water charges

Rural water prices for unregulated water, diverted under water harvesting authorities in regulated sections and in managed groundwater areas, are as set out in the gazetted Rates and Charges Regulation 1992. These charges, generally indexed annually.

The Council also understands that charges for unregulated supplies, surface water and groundwater were set, generally after consultation with users, to

[4] Generally, rising water costs were expected to have a marginal impact on farm cash position in most schemes, although slower price increases were set in areas significantly affected by low sugar prices and dairy industry deregulation.

reflect the additional costs of resource management in those areas, including, where relevant, the costs of metering, billing and reporting.

Discussion

SunWater

Following the 1999 tripartite meeting all governments agreed that the Council, in assessing progress with rural water pricing in the third tranche, would look for evidence that:

- cost recovery had been achieved; or
- a path had been set to achieve cost recovery; or
- ongoing assistance where required, had been made transparent.

Queensland provided evidence that a price path has been set for those schemes that will not achieve cost recovery by 2001. The Council notes that assistance provided to these schemes will be transparently reported in SunWater's annual report. Only a small number of schemes (category 3) will require ongoing assistance.

The price paths are likely to lead to most schemes achieving cost recovery within a reasonable time. Queensland considers that the paths are based on a rigorous process, and were developed in consultation with scheme participants. However, irrigator groups raised a number of concerns with the Council.

In regard to the level of costs to be recovered, irrigator groups expressed concern over the estimates of efficient costs identified by Queensland. For example, the Interim Local Management Committee for the Mareeba–Dimbulah Irrigation Area advised the Council that they have no confidence in the veracity of the figures used and the components slated against each sectorial group in determining its price path. Particular concern relates to estimates of the potential savings in overhead expenditure, with irrigator groups claiming that overheads represent a significantly higher proportion of total costs than they do in schemes in other States.

The Council has not attempted to recreate the detailed analysis undertaken by Queensland in forming the price paths but notes that:

- the estimates were based on independent advice and appear to be based on a sound process;

- the establishment of customer councils and the potential for schemes to move to self-management in three years provides a significant incentive to SunWater to achieve the targeted efficiency improvements;

- there was scope for irrigator involvement in the price-setting process before price paths were finalised (although this matter is discussed further below); and

- the impact of the price paths can be offset somewhat through a rebalancing of fixed and variable charges and through trading in water rights.

The Council also notes that Queensland undertook to re-benchmark SunWater's costs in 2004. The Council will look for this analysis to consider the possibility of any further efficiency improvements and for this and other relevant material to be made available to customer councils.

Other concerns raised with the Council regard the level of meaningful consultation undertaken before the price paths were finalised. The Queensland Farmers Federation for example, argued that the consultation phase was rushed once the Statewide pricing analysis was completed and that water users do not understand how the price paths were derived and how they relate to their schemes. It stated that irrigators were surprised, for example that prices were indexed over the five-year period by the consumer price index. The interim local management committee for the Mareeba–Dimbulah Irrigation Area stated that the summary figures provided do not enable detailed examination.

In conducting future NCP assessments the Council will also look to ensure that performance information is made available on a regular basis. In particular, the Council will look for sufficient information to be provided to scheme participants to enable customer councils to make informed input into the operations of schemes (see the section on institutional reform).

The Council notes that some SunWater customers expressed significant reluctance to pay prices that include a return on assets and withheld a proportion of their water bills. The CoAG commitments require only that prices be set such that, as a minimum, sufficient revenue is generated to ensure the economic viability of the scheme while avoiding monopoly returns. Therefore, governments are entitled to earn a return on assets wherever possible.

Other rural water charges

In assessing compliance with rural water cost recovery commitments, the Council's primary focus has been on the performance of government-owned or funded irrigation schemes. Cost recovery by other rural water services will receive closer scrutiny in future assessments.

The Council suggests that applying the principle of incremental cost, as appears to have been done by Queensland, is consistent with CoAG commitments. The Council has not been provided with detailed information on the level of cost recovery achieved by current arrangements but these arrangements are under review.

Assessment

Queensland has met the 2001 NCP commitments for rural water pricing. The implementation of full cost recovery for irrigation schemes is one of the major building blocks of the rural water reform agenda. The Council supports the efforts made by the State to move its irrigation schemes to achieve cost recovery to ensure irrigation schemes remain viable over the longer term and does not underestimate the challenges for both the Queensland Government and rural producers in achieving these outcomes.

However, the Council notes the significant concerns expressed by irrigator groups in relation to the estimates of efficient costs used in setting the price paths and the level of consultation.

In conducting future NCP assessments, the Council will look for sufficient information to be provided to customers through customer councils to enable them to make assessments about whether the benchmarked efficiency improvements in irrigation schemes are being achieved and for them to have informed input into the operations of schemes.

In 2002, the Council will review cost recovery by rural water charges levied by the Department of Natural Resources and Mines.

Consumption-based pricing

Governments endorsed the principle that prices should reflect the volume of water supplied so that prices encourage more efficient water use and to give customers more control over the size of their water bill. For urban water providers using surface water or groundwater, two-part tariffs (comprising a fixed access component and a volumetric cost component) are to be introduced where cost effective (clauses 3a and d).

Queensland arrangements

SunWater

A two-part tariff has been in place since 1997-98 for most of the schemes operated by SunWater. However, Queensland noted that the low fixed charge does not provide a stable revenue base for a typical scheme. Queensland advised that the majority of the price increase provided by the price paths to apply from October 2001 will occur through the fixed charge with corresponding decreases in the variable charges where required. Generally, this will result in the fixed charge generating 70 per cent of revenue. Queensland stated that this reflects the split between fixed and variable costs in the State's irrigation systems and is similar to the benchmarks adopted by the Independent Pricing and Regulatory Tribunal in New South Wales.

Other rural water charges

Table 4 lists the general fees applying to water in unregulated areas and water harvesting (regulated areas), as advised by Queensland.

Table 4: Summary of non-SunWater rural water charges

Authority type	*Charging arrangement*
Water licences (unregulated)	Once-off $75 application fee
	Some charging arrangements in areas requiring intensive management to cover metering costs
Water harvesting (regulated)	Volumetric charge for first 500megalitres. Water harvesting charges ranging from $2.70/megalitres to $4.20/megalitres , with a maximum fee (that is, 500 megalitres) applicable
Groundwater management	Annual charges, some volumetric charges and minimum account fees in groundwater management areas
	No charges for groundwater taken outside of a groundwater management area

Source: Queensland (2001a)

Discussion

SunWater

A submission by the St George Irrigation Area questioned the basis on which Queensland has set its consumption-based two-part tariff. This group argued that there are other, more efficient, approaches to setting prices. The Council

notes that the CoAG agreement does not specify the form in which consumption-based pricing is to be introduced. Queensland's existing arrangements do send a volumetric signal to users. Hence, the current arrangements do not breach CoAG commitments.

Other rural water charges

While the Council's primary focus in the assessment of water charges has been on those levied by SunWater, it is concerned that current arrangements for water harvesting have a volumetric charge only for the first 500 megalitres. Water above this level is free. Queensland advised that the historic reason for applying this ceiling on volumetric charges was that it reflected that the costs in any area depend on the number of diversion points (or bores) more than on the volume of water diverted.

The Council's view is that such a price ceiling does not provide an incentive for users of more than 500 megalitres to apply the water economically. The Council acknowledges the potential for scale economies in monitoring and licensing. However, it also suggests that an alternative, such as a declining block tariff (rather than an elimination of the price signal), would better reflect this potential.

The St George Irrigation Area submission also noted that a single maximum charge is being applied to clusters of licences on application from the owners of properties riparian to the Balonne River. The potential to bundle licences aggravates the distortion in efficient water use that the ceiling on charges may create. Similar issues were raised by the Greens submission including a ceiling on water bills for private diversion with developers paying only for the first 500 megalitres.

The Council will look for the current review of licence charges to consider this issue when it makes its next NCP assessment in 2002.

Assessment

The Council is satisfied that rural water services provided by SunWater reflect the principle of consumption-based pricing consistent with CoAG commitments. In conducting future assessments, the Council will look for evidence that Queensland is refining its other rural water charges.

Community service obligations

Where service deliverers are required to provide water services to classes of customers at less than full cost, this cost should be fully disclosed and, ideally, paid to the service deliverer as a CSO. Governments agreed that the Council would not make its own assessment of the appropriateness of any individual CSOs but would review information provided by governments in totality to ensure these CSOs do not undermine the objectives of the agreed water reform framework (clauses 3a and d).

Queensland arrangements

Regarding the irrigation schemes, SunWater receives an annual rural water CSO, which is calculated as the difference between the benchmarked efficient costs of service (discussed above) and the price path revenue. SunWater's charter and statement of corporate intent require the rural water CSO to be reported on a scheme-by-scheme basis. The Council understands that SunWater's annual report will cover this reporting requirement.

The price paths introduced on 1 October 2001 will result in a reduction in annual subsidies of $7 million over five years. Subsidies worth around $1.5 million for category 3 schemes will remain after 2005. The Council has not been advised on any other CSOs provided to rural users.

Assessment

The Council is satisfied that Queensland has met 2001 NCP commitments in relation to rural water CSOs.

Cross-subsidies

Cross-subsidies should be transparently reported and ideally removed where they are inconsistent with efficient service provision and use (clauses 3a and d).

Queensland arrangements

The fact that price paths are established on a scheme by scheme basis, with the shortfall in returns met by a transparent CSO, addresses the potential for cross-subsidies between rural schemes.

Regarding other rural water charges, the current ceiling on water harvesting volumetric charges means that water charges do not reflect the amount of water used.

Assessment

The Council is satisfied that Queensland has met 2001 NCP commitments in relation to cross-subsidies. In 2002 it will look further at other rural water charges.

New rural schemes

Governments agreed that all investments in new rural water schemes or extensions to existing schemes should be undertaken only after appraisal indicates that it is economically viable and ecologically sustainable (clause 3d(iii)).

Queensland Arrangements

Previous NCP assessments considered Queensland's progress in appraising the economic viability and ecological sustainability of rural investment. These assessments noted that the Queensland framework meets the requirements of the reform framework.

Ecological sustainability

Under the *Water Resources Act 1989*, new water infrastructure developments will be able to proceed only if a bulk water entitlement and resource operations licence can be obtained from the Queensland Government. For this to occur, the proposed development would need to be consistent with a water resource plan that identifies that an appropriate quantity of water is available.

Prior to government approval of major developments, an impact assessment statement must be prepared. The impact assessment statement must take into account environmental, economic, cultural and social impacts, among other things, and must be prepared in accordance with relevant Queensland and Commonwealth legislation, including:

- the Queensland *Environment Protection Act 1994;*
- the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999;*
- the *Integrated Planning Act 1997;*
- the Water Resources Act*;* and
- the *State Development and Public Works Organisation Act 1971.*

Economic viability

In September 2000 the Queensland Government released its guidelines for the Financial and Economic Evaluation of New Water Infrastructure in Queensland. These guidelines require the project proponent to conduct a financial assessment to determine whether the financial return is sufficient to make the project commercially viable (profitable) on a stand alone basis.

The guidelines then require an economic assessment of the proposal to be conducted to account for broader community costs and benefits to establish whether society as a whole will be better off as a result of the development. The economic assessment is based on standard cost-benefit analysis. Where an assessment suggests that the project is not financially viable but economically viable, a CSO could be considered, but the project must at least cover the lower bound of the agreed CoAG pricing guidelines. In all instances, funding would need to be consistent with the guidelines and 'Community Service Obligations: A Policy Framework' (released in March 1999), and be a clear priority for the Queensland Government.

Proposed developments

There are some major developments, such as the Nathan Dam and the Paradise Dam, being considered in Queensland. If it is decided that these or any other investments in rural infrastructure are to proceed, Queensland will need to demonstrate that ecological sustainability and economic viability have been considered consistent with the processes outlined above.

Assessment

The Council is satisfied that Queensland has meet 2001 NCP commitments. However, in conducting future assessments, the Council will continue to monitor any decisions to invest in new rural infrastructure.

Institutional reform

Structural separation

As far as possible the roles of water resource management, standards setting and regulatory enforcement and service provision should be separated institutionally by 1998 (clauses 6c and d).

The differences in the type, structure and size of the organisations involved in providing water services in Queensland makes the State's industry one of the most diverse in the country. Queensland recognises this diversity and, in reforming its regulatory framework, said that it would develop a consistent and coherent framework that does not discriminate between different types of service provider.

The regulation of urban water service providers, in particular, confronts challenges raised by the extensive involvement of local government and the large number of small local government water businesses.

Queensland arrangements

The new *Water Act 2000* brings together many of the arrangements for reforming the relationships between water institutions in Queensland.

As noted in the Council's supplementary NCP assessment in January 2001, the Water Act was enacted on 13 September 2000 and most of its provisions commenced on 1 October 2000. The Council's supplementary NCP assessments in June 2000 and December 2000 discussed the provisions in this Water Act. While the Water Act establishes the legislative foundation for the State's new institutional arrangements, Queensland has also been progressing several linked issues outside the Water Act. These include:

- prices oversight by the Queensland Competition Authority;
- the corporatisation of SunWater; and
- restructuring of the Department of Natural Resources and Mines.

Service provision

Service providers involved in the Queensland water industry include:

- 125 local governments ranging in size from the Brisbane City Council, which supplies more than 300 000 water connections, to about 40 per cent of local governments with less than 1000 connections;
- four major urban and industrial bulk water suppliers – SEQWater, Townsville Thuringowa Water Supply Board, Gladstone Area Water Board and Mount Isa Water Board;
- SunWater (previously State Water Projects), which provides and manages about 40 per cent of Queensland's irrigation water, virtually all water for

power generation and much of the water for mining and some urban services; and

- 23 water boards, 17 drainage boards and four bore water boards that supply water for stock and domestic use, some irrigation and town water in a few cases.

Prices oversight

The *Queensland Competition Authority Act 1997* provides for the Queensland Competition Authority to be involved in prices oversight in the water industry. SEQWater was declared for prices oversight in March 2000 and the Gladstone Area Water Board in September 2000. The Queensland Competition Authority is currently investigating the pricing practices of Gladstone Area Water Board. It released a discussion paper and is consulting with stakeholders. The draft report is expected at the end of August 2001. In addition, SunWater and Mount Isa Water Board have been declared for prices oversight. Initially, oversight of SunWater involves only those water supplies not covered by the gazetted rural water price paths, because the Queensland Competition Authority cannot overturn the government's five-year rural price path. The Townsville Thuringowa Water Supply Board will be considered for prices oversight once its business restructuring process is finalised.

The largest 18 local government retail water and sewerage businesses were declared for prices oversight in June 2001. Complaints to the Queensland Competition Authority or the Premier or Treasurer may trigger investigations into individual local government water prices after consultation with the relevant local government.

Corporatisation of SunWater

After the finalisation of its corporatisation charter, appointment of a skills-based board in 2000 and passage of the *Water Act 2000*, SunWater was corporatised under the *Queensland Government Owned Corporations Act 1993* on 1 October 2000. Under the Water Act, SunWater's board is responsible for:

- SunWater's commercial policy and management;

- ensuring that SunWater acts in accordance with its statement of corporate intent;

- accounting to the shareholding Ministers for the performance of SunWater; and

- ensuring SunWater performs its functions in a proper, effective and efficient way.

The Government Owned Corporations Act separates the day-to-day management of SunWater from its two shareholding Ministers, the Minister for Natural Resources and Mines and the Queensland Treasurer.

Various mechanisms improve the transparency of SunWater's activities. SunWater is obliged to meet a range of accountability obligations set out in its statement of corporate intent and a corporate plan. These documents are agreed with the shareholding Ministers and then made public through SunWater's annual report, after its first year of operation.

SunWater's corporatisation charter notes that its statement of corporate intent requires quarterly and annual reporting against a range of indicators that are benchmarked, where possible, against comparable organisations. These indicators cover financial, efficiency, effectiveness, service quality, size and cost and revenue criteria.[5] Unless this information is commercially sensitive it is required to be included in SunWater's annual report.

The shareholding Ministers have reserve powers to advise the board on any public service policy that is in the public interest or, in exceptional circumstances, to direct the board in the public interest. Prior to issuing such a notification or directive the Ministers must consult with the board. Any direction to SunWater must be gazetted within 21 days of the direction being made.

Under the *Water Act 2000*, SunWater was issued with a number of interim resource operation licences for each of its schemes. Individual licences cover each water supply scheme operated by SunWater. The monitoring and reporting provisions in these licences require SunWater to report to the chief executive of the Department of Natural Resources and Mines on environmental indicators such as water quality, environmental flow provisions, the operation of fishways, underground water levels, and the use of water and diversions by each customer.

SunWater also has a standard customer service contract. This contract sets the minimum service standards that customers can expect. Individual customers are free to negotiate higher standards if they wish.

Restructuring of the Department of Natural Resources and Mines

The restructuring of the Department of Natural Resources and Mines has been finalised. All service delivery functions are now the responsibility of

[5] This benchmarking is in addition to the participation of the 14 irrigation schemes in the national rural benchmarking project.

SunWater, while the department's role covers policy, planning and industry regulation functions.

Discussion

In its assessment of structural reform the Council has focused on whether the arrangements in each State and Territory are accountable, are transparent and deal effectively with conflicts of interest. It considered three broad areas of regulation when looking at institutional arrangements:

- economic regulation and service standards;
- resource management, water allocation and environmental regulation; and
- health regulation.

Since the Council first considered these issues in June 1999, Queensland made substantial improvements to its institutional arrangements. In particular, the corporatisation of SunWater, the restructuring of Department of Natural Resources and Mines, and the passing the *Water Act 2000* and the *Queensland Competition Authority Amendment Act 2000* effectively addressed many of the issues identified in the Council's second tranche NCP assessment.

In the following supplementary NCP assessments the Council noted that the few remaining issues would be considered in its 2001 NCP assessment. In the area of economic regulation and standards setting, the outstanding issues were the:

- extent to which the Queensland Competition Authority's prices oversight powers are being used in the water sector; and
- different treatment of customer service standards for local government and non-corporatised government service providers and for corporatised government and private sector providers.

For resource management, water allocation and environmental regulation, the outstanding issues were:

- arrangements for separating service delivery and regulation for SunWater, given the dual roles of the Minister for Natural Resources and Mines; and
- the ability of local governments to require individuals to connect to their sewage service provider's infrastructure.

In addition, a report by the Productivity Commission noted that while the Minister for Health has extensive powers in the event of a public emergency, and the Queensland Health Department encourages water service providers

to meet Australian drinking water guidelines, the responsibility for drinking water quality rests with local governments (PC 2000). It also concluded that Queensland, unlike most other States, had no mechanisms for enforcing quality standards for water.

Economic regulation and standards setting

Prices regulation

At the time of the Council's second tranche NCP assessment no water businesses were declared for prices oversight by the Queensland Competition Authority, so the authority had a potential role in price regulation but no practical involvement. This has changed: most of the significant water businesses have been, or will be, declared for prices oversight, and one review is underway.

There is no similar process for smaller local governments. Therefore, the Council is looking for transparency and accountability in pricing and subsidies to reduce the risk that problems will arise form any remaining potential conflicts of interest.

The Queensland Government has committed to two processes that will improve transparency and accountability:

- First, Queensland will fund the Business Management Assistance Program. Under this Program, the Local Government Association of Queensland will work with local governments to assist in reform implementation. This will improve the understanding among local governments of their NCP obligations and increase the level of participation in the Queensland Competition Authority's assessment process.

- Second, Queensland has committed to working with the Local Government Association of Queensland to determine the best arrangements for ensuring information is made publicly available about the pricing arrangements for individual local governments and community service obligations and subsidies are made apparent.

Differences in the treatment of customer service standards

The *Water Act 2000* specifies a rigorous process for regulating customer service standards for corporatised and private sector water businesses. Within one year of being registered, the service provider is required to prepare customer service standards and give a copy of those standards to the regulator (the chief executive officer of the Department of Natural Resources) and to their customers. The Water Act states that the service provider must comply with these standards. The service standards must include the level of service to be provided, and the processes for service connection, billing,

metering, accounting, customer consultation, and complaints and dispute resolution.

If customers cannot resolve a complaint through negotiation with the service provider, then they can notify the regulator. The regulator then inquires into the matter and, if action is needed, can require the service provider to comply with the service standards. If the complaint highlights a deficiency in the standard, the regulator can require the service provider to revise the standard.

In the case of complaints against local government or non-corporatised government service providers, the regulator has no powers to investigate complaints, enforce compliance with service standards or require the revision of standards. However, customers can raise their complaints with the State Ombudsman. This arrangement will take effect once local government water businesses prepare their customer service standards.

Resource management, water allocation and environmental regulation

Separation of service delivery and regulation for SunWater

The Minister for Natural Resources and Mines, is responsible for resource management, service standards and enforcement. These roles could conflict with the Minister's responsibilities as a joint shareholder in SunWater. To address these issues, the Council is looking for the establishment of procedures and other measures that ensure potential and actual conflicts of interest are minimised.

Queensland provided information on the separation of powers between the operation of the water business and regulation, noting the following points:

- two shareholding ministers reduce the risk of inappropriate decisions if one potentially has a conflict;
- the shareholding Ministers are required to deal with the board at arms length;
- the department's shareholder responsibilities are handled separately from the regulator responsibilities in the Office of the Director General;
- the Minister has only legislative responsibilities for the water resource plans. Other regulation and water resource management rests with the chief executive office of the Department of Natural Resources and Mines or the Director General;
- the Minister has no hands-on involvement once a water resource plan is established. Implementation decisions are made by the department's chief executive officer and are subject to judicial review; and

- water resource plans are developed through an open and transparent process. It is not possible to give preference to SunWater because these are global plans that affect all businesses.

The Council considers that there is separation and transparency in most aspects of water resource management and allocation in Queensland. The remaining issue concerns decision-making regarding the outcomes of the water resource planning process, where certain decisions of the Ministers could potentially affect commercial aspects of SunWater's business.

Requirement to connect to sewerage services

Local governments have the power to declare areas and require people to connect to their sewerage services. In the past, there were often good public health reasons for requiring people to connect to the town sewer, but now the development of technology means that approved waste disposal systems provide a safe alternative to connection to the town sewer system. However, often the water services provider is responsible for approving the use of such systems. Therefore, they are regulating the use of competing systems as well as being the local service provider. This creates a conflict of interest.

Queensland noted that:

> *The provisions in the* Water Act 2000 *which allow local governments to declare a water supply or sewerage area are essentially unchanged … Local governments administer these provisions.*
>
> *The provisions are based on the premise that in certain declared areas (generally high density urban areas), an adequate sewerage and water supply system is necessary for public health and amenity reasons.*
>
> *While policies on alternatives to sewerage and wastewater disposal may be considered (eg. under the Queensland Water Recycling Strategy), there are still significant issues which need to be resolved, particularly those relating to maintaining health standards (Queensland 2001b).*

Health regulation

Queensland reviewed the *Health Act 1937*. Under the proposed new Health Act, consideration is being given to requiring water authorities to prepare Drinking Water Management Plans and to report the results in their annual reports. If a water quality risk is identified, the water authority must report this to the Department of Health. The department can issue public health warnings. Queensland noted that:

> *Although the [Australian Drinking Water] Guidelines will assist in the review of drinking water quality management, there must be a suitable level of flexibility in their application to both protect public health and take account of the variations in chemical and mineral properties in water in rural and remote areas.* (Queensland 2001b)

Assessment

Queensland made some progress on all of the identified outstanding issues in the separation of resource management, service standards and regulatory enforcement from service provision. For price regulation generally, Queensland demonstrated satisfactory progress in the Queensland Competition Authority's involvement in prices oversight, including declaration of the big 18 local governments for prices oversight. The Council will continue to monitor the application of these arrangements in future NCP assessments.

For smaller local governments, the State Government committed to working with the Local Government Association of Queensland to increase the level of reform implementation. In addition, Queensland committed to improving the transparency in reporting price and subsidy information for smaller local governments. The Council considers that these two initiatives will assist local government to implement reform and thus meet Queensland's obligation for the 2001 NCP assessment. In future assessments the Council will look at the implementation of these initiatives and assess whether they are delivering reform outcomes consistent with the CoAG water agreements.

The involvement of the ombudsman in regulating service standards for local governments should address the Council's concerns in this area. However, this arrangement is still to be implemented and the Council has little information on the scope of the ombudsman's powers. Therefore, the Council will review progress in the 2002 NCP assessment.

For SunWater, Queensland needed to demonstrate sufficient accountability and mechanisms to address any conflicts of interest between the Minister for Natural Resources and Mine's roles as a SunWater shareholder and as the body responsible for water allocation and resource management. Queensland provided evidence on a range of processes for minimising the risks of such conflicts of interest. In addition, Queensland committed to improving the transparency in the water resource planning process by releasing an expanded section 51 report when the water resource plan is finalised. The expanded report will still include a summary of the issues raised during the consultation process and how those issues were dealt with in coming to the final plan. It will also provide a summary of the approved plan and its implications and a discussion of the aspects of the approved plan that are significantly different from the draft plan. The Council considers that effective reporting on the final plan will resolve any outstanding institutional reform issues. Therefore, it has concluded that Queensland has met its 2001 NCP commitments but will monitor these arrangements to ensure the

reporting arrangements are implemented and provide sufficient information to make the decision-making process sufficiently transparent.

Queensland notes that while policies on alternatives to sewerage and wastewater disposal may be considered, there are still significant issues that need to be resolved, particularly those relating to health standards.

The 1996 Australian drinking water guidelines are used to set water quality standards in Queensland. The Department of Health is the responsible department. In the 2002 NCP assessment, the Council will look at what structures are in place to manage drinking water standards across the State.

Overall, while the Council will need to monitor a range of issues it has concluded that Queensland has made sufficient progress in the area of institutional separation to meet the requirements of the 2001 NCP assessment.

Performance monitoring and best practice

ARMCANZ is to develop further comparisons of interagency performance with service providers seeking best practice (clause 6e).

Queensland arrangements

Queensland is continuing its support for the benchmarking processes. Brisbane City Council, Gold Coast Water and SEQWater participate in the Water Services Association of Australia benchmarking project and 17 local governments and two water supply boards participated in the Australian Water Association benchmarking study in 1999-2000.

Queensland increased its involvement in the Australian National Committee on Irrigation and Drainage rural benchmarking project from 10 to 16 service providers. These service providers include two rural water boards and 14 irrigation schemes.

Assessment

Queensland has been actively involved in benchmarking projects and expanded its involvement in rural benchmarking. Therefore, the Council has concluded that Queensland has met its reform commitments for benchmarking service providers.

Commercial focus

Metropolitan service providers must have a commercial focus, whether achieved by contracting out, corporatisation, privatisation etc, to maximise efficiency of service delivery (clause 6f).

Queensland arrangements

All of the big 18 local government water and sewerage businesses have been commercialised or subject to full cost pricing. Brisbane Water is a commercialised business unit operating under a franchise agreement with the Brisbane City Council, and Hervey Bay is considering corporatising its water business. Significant progress was made in improving the commercial focus of urban bulk water boards. The South East Queensland Water Board was incorporated as a Corporations Law company (SEQWater) in March 2000. The State and 12 local governments jointly own SEQWater. The Gladstone Area Water Board and Mount Isa Water Board is State owned and became commercial entities under the Water Act on 1 October 2000. The Townsville Thuringowa Water Supply Board was converted to a joint local government entity on 30 June 2001. The new entity will operate its bulk water supply activities under the commercialisation provisions of the *Local Government Act 1993*.

Discussion and Assessment

Reform for the Townsville Thuringowa Water Supply Board was delayed, as it was originally expected to be commercialised from January 2001. The Council has concluded that Queensland has met this reform commitment, and it will monitor progress further in the 2002 NCP assessment.

Devolution of irrigation scheme management

Constituents be given a greater degree of responsibility in the management of irrigation areas, for example, through operational responsibility being devolved to local bodies, subject to appropriate regulatory frameworks being established (clause 6g).

In Queensland, SunWater manages 34 irrigation schemes. SunWater was required to establish customer councils for all of its schemes within six months of corporatisation. These customer councils are intended to give irrigators the opportunity to provide advisory input into SunWater's decision making process. This input will be in areas such as:

- business planning;
- the negotiation of customer service contracts;
- customer service and asset performance standards and asset management plans;
- the prioritisation of asset investment and refurbishment programs for various schemes;
- the development of communication strategies and participation in communication between SunWater and its customers; and
- other customer service issues that come to the customer council's attention.

Queensland also provided some opportunities for irrigators to submit local management proposals for irrigation schemes in the nine months following corporatisation (that is until 30 June 2001). The shareholder Ministers for SunWater make the final decision on whether local management is appropriate, after considering the views of SunWater's board and those interested in local management, as well as considering wider community, regional, financial, economic, social and environmental considerations. Local management will not be considered again until two years before the end of the five-year price regulation period.

Irrigators raised concerns about the criteria applied to local management (see Box 3). In particular, they expressed concern about criterion (b), that there will be no adverse financial impacts on the State government and the process where the Ministers responsible for SunWater make the decisions on whether a scheme will move to local management. In response Queensland notes that:

> *Two key building blocks of the Queensland Government's Charter of Fiscal and Social Responsibility are managing financial risk and building the State's net worth. It would be irresponsible of the Queensland Government to pursue local management arrangements if these fundamental financial requirements could not be satisfied.(Queensland 2001b).*

Also Queensland considers that moving to local management is a business decisions and hence;

> *In this regard, where an irrigation scheme submits a proposal to adopt local management, the decision to agree to local management would be treated as a business arrangement, as would any proposal to acquire/take over assets if the company was a private company. It is normal practice for business proposals of this type to be considered by the shareholders of the company. (Queensland 2001b).*

Box 3: Conditions of local management

To be eligible for local management the following conditions must be met:

(a) there will be a clear and unequivocal improvement in the long term financial viability of the scheme;

(b) user management of individual irrigation schemes will have no adverse financial impacts for the State Government;

(c) the user managers accept responsibility for asset maintenance and refurbishment;

(d) the user managers accept that they are responsible to comply fully with the regulatory framework for the water industry including but not limited to:

- water Resource Plans, Resource Operations Plans and other resource management regulatory instruments;
- works approvals and control through the Integrated Planning Act; and
- service provider obligations including Strategic Asset Management Plans, customer service standards and, where relevant, dam safety provisions;

(e) User managers must provide sufficient information to Shareholding Ministers to demonstrate that water prices under user management are to be at levels that achieve, at least, minimum financial viability.

Source: Queensland (2001a)

Discussion

Queensland's approach to local management appears to be restrictive. Irrigators only had until mid-2001 to submit a local management proposal. Given the amount of information and consultation necessary for a region to decide that it is interested in pursuing local management options, this was a very short timeframe. After mid-2001 irrigators will not have another opportunity to negotiate the adoption of local management until 2003.

The Council is also concerned that the criteria for local management may be interpreted in such a way that they do not allow an efficient local group, with low overhead costs, to move to local management. However, the Council notes that the CoAG agreements do not require devolution of schemes to local management. Rather, the commitment requires the Council to be comfortable that customer councils are being given a greater degree of responsibility in the management of schemes.

Therefore, the Council has focussed on the customer councils as the most likely mechanism for providing irrigators with more input into the operation of schemes. SunWater's shareholding Ministers have written to irrigators noting their intention for SunWater to focus on customer relations and outlining a range of initiatives to facilitate the work of the customer councils. These initiatives include as soon as practicable:

- *SunWater to develop a Service Charter addressing and clarifying its commitment to users with each Customer Council by December 2001;*

- *SunWater to engage an independent facilitator during negotiations on any Service Charter should the need arise;*

- *SunWater to develop reports/indicators to give Customer Councils an understanding of the company's progress towards efficiency improvements;*

- *SunWater to clarify dispute resolution processes;*

- *Government to have an independent review of the efficiency of SunWater's costs undertaken in three years time;*

- *Government to make interim arrangements for permanent water trading available as soon as possible, to allow irrigators to reduce ongoing water changes through greater water efficiencies. (Queensland 2001c)*

Some stakeholders have expressed scepticism about whether customer councils will be effective in increasing local involvement in irrigation schemes. For example:

> *…the terms of reference for Customer Councils (promulgated by SunWater) do not give irrigators any increased responsibility in the management of schemes and as such do not comply with this criterion. (MDIA submission p.4)*

The effectiveness of these initiatives will depend on how SunWater responds to issues raised by the customer councils and whether the reports and indicators provided to customer councils provide sufficient information for irrigators to develop a good understanding of service delivery and management issues for their schemes. It is too soon, therefore, to know whether this consultation mechanism is working effectively.

To meet Queensland's water reform commitments, customer councils will need to have real input into decision-making processes. The water reform framework envisages more than consultation; it requires these committees to have input into decisions on the management of irrigation areas.

Assessment

The Council has concluded that Queensland's customer councils could meet its water reform commitment on local involvement in irrigation management. The Council will monitor the operations of these customer councils to ensure

SunWater is using them as an effective mechanism for irrigator input into decision-making.

Allocation and trading

Water allocations and property rights

There must be comprehensive systems of water entitlements backed by separation of water property rights from land title and clear specification of entitlements in terms of ownership, volume, reliability, transferability and, if appropriate, quality. Governments must have determined and specified property rights, including the review of dormant rights (clause 4a).

The Queensland water allocation process is being addressed through the development of water resource plans[6] for catchments and basins. The plans are designed to set water allocations, environmental flows and the conditions under which trading can take place. Resource operations plans are detailed sub-catchment plans developed to implement water resource plans.

Queensland arrangements

Water property rights

The Council considered Queensland's property rights system against second tranche NCP commitments as part of the January 2001 supplementary assessment. Table 5 provides a brief summary of the features of the Queensland system.

[6] Under the *Water Act 2000*, water resource plans replace the previous terminology of water allocation and management plans for the major systems and water management plans for the smaller systems, which were produced under the former *Water Resources Act 1989*. These plans are deemed to be water resource plans under the *Water Act 2000*. For the sake of simplicity, all plans will be referred to as water resource plans in this assessment.

Table 5: Queensland water property rights

Key item	*Queensland*
Entitlements/rights	
Nature of water licence	Riparian rights allow water to be taken by an owner of land adjoining a watercourse, lake or spring for stock and domestic purposes. Water may also be taken without an entitlement for an emergency such as a bushfire, for camping or to water travelling stock. In times of water shortage or emergency, the Minister may limit the taking of water for up to three weeks. The Minister may also limit by regulation the right to draw water for domestic use in specific locations—for example, to prevent rural residential subdivision. All other use requires an allocation.
Nature of water entitlement under *Water Act 2000*	Water resource plans specify the rules on how water will be allocated, environmental flow provisions, and water allocation security objectives. They are of a 10-year duration, with periodic public reporting. They are legally enforceable as subordinate legislation. Resource operations plans are more detailed sub-catchment plans that implement the objectives of water resource plans including trade. Resource operation plans are of a 10-year duration with review linked to changes to the water resource plan. A water allocation is an authority to take water in accordance with a resource operation plan or water resource plan and is separate from land title. Licences will exist in those parts of the State where a water resource plan or resource operation plan is not in place and are tied to land title. All are volumetric. Resource operations licences are granted to water infrastructure operators. A person may take or interfere with overland flows unless a moratorium notice or a water resource plan limits this activity. The water resource plan can manage overland flows if there is a risk that water use may have an impact on the outcomes of the plan, affect the availability of water to existing users, or have an impact on the water requirements for natural ecosystems. Compensation is payable under the Water Act if during the 10-year life of the water resource plan, allocations are changed in a way that reduces the market value of allocations.

The Council's January 2001 supplementary second tranche NCP assessment provided further details including the provisions of the *Water Act 2000* that are the legislative framework for allocation, management and regulation of water resources in Queensland, including groundwater and overland flows.

Water resource plans

The Water Act allows the Government to prepare a water resource plan for the allocation and sustainable management of water for any part of Queensland. Such plans are subordinate legislation under the Water Act and are effective for 10 years unless, as a result of a review (see below), a new plan is prepared and approved. At the end of 10 years, a plan must be

reviewed and either amended or renewed. Taking water contrary to a water resource plan is an offence.

A water resource plan must state environmental flow provisions, water allocation security objectives, performance indicators for these objectives, and priority areas for the conversion or granting of water allocations. It may be prepared for any purpose, including to:

- define the amount of water available for consumptive use and the water required for natural ecosystems;
- provide a framework for the establishment of water allocations through the conversion of water licences or other entitlements or the granting of new water allocations;
- provide a framework for the allocation and taking of water, for example, to put limits on issuing water licences;
- identify strategies for meeting future water requirements, for example, by issuing further water entitlements through the purchase, transfer and conversion of existing entitlements; and
- provide a framework, where practicable, for reversing the degradation of natural ecosystems, where the cause of such degradation relates to water allocation and management.

Implementation of water resource plans is to occur through preparation of resource operations plans, the granting of resource operations licences, and the conversion of certain existing water licences and interim water allocations to water allocations.

The process for completing a water resource plan is as follows:

- First, there is a pre-planning phase with the commencement of data collection.
- Second, there is a draft plan development phase, before the draft plan is released for public review and then approved and implemented.

To develop a water resource plan, the Department of Natural Resources and Mines must:

- embark on an extensive flow model development process and test flow scenarios with the model;
- form a community reference panel to enable active community engagement and input into the development of the plan; and
- appoint a technical advisory panel to provide the environmental science needed to inform the decision making process.

Sections 53 and 54 of the *Water Act 2000* requires periodic reports to be prepared for each water resource plan. The Fitzroy and the Burnett water resource plans, for example, require annual reports against the requirements of these water resource plans. The annual report must include:

- a summary of the findings of research and monitoring for the plan;
- an assessment of the effectiveness of the implementation of the water resource plan in meeting the water resource plan's objectives (including environmental objectives);
- an assessment of whether the plan's objectives continue to promote the purposes of the Water Act (having regard to any new information available);
- a summary of total water entitlements covered by the water resource plan;
- particulars of any changes made to the water resource plan; and
- information about any non-compliance with the plan and the resource operations plan.

In preparing a water resource plan, the Minister for Natural Resources and Mines must make both an information report and the draft plan available for public consultation. Upon finalisation of the plan, the Minister must make public a report under s51 of the Water Act, providing a summary of issues raised during the consultation process and the resolution of those issues.

As at 31 March 2001, water resource plans had been completed for the Fitzroy River Basin, Cooper Creek Basin, Boyne River Basin and Burnett River Basin. Draft water resource plans had been released for the Condamine–Balonne Basin, Moonie River and Warrego/Paroo/Bulloo/Nebine rivers. The timetable for completion of water resource plans in Queensland and a map of plan coverage are included as attachment 2.[7]

While water resource plans are to cover most of Queensland, a small number of catchments in the State will remain uncovered (for example, much of the Cape York Peninsula and small coastal streams). Consideration will be given to preparing water resource plans for those regions if water demand in these areas increases or if particular ecological issues need to be addressed.

[7] Information on the current status of plans can be accessed from the Queensland Department of Natural Resources and Mines website at: http://www.dnr.qld.gov.au/resourcenet/water/wrp/index.html.

Resource operations plans

Under the *Water Act 2000*, resource operation plans are detailed subcatchment plans developed to implement water resource plans. A resource operation plan must include details of:

- the area to which it will apply;
- any water infrastructure to which the plan applies;
- how the chief executive of the Department of Natural Resources and Mines will sustainably manage water to which the plan applies; and
- the water and natural ecosystem monitoring practices that will apply.

In addition, to achieve the objectives outlined in the relevant water resource plan, a resource operation plan may include any of the following:

- environmental management rules, seasonal water assignment rules and water sharing rules;
- a process for granting, reserving or otherwise dealing with unallocated water;
- a process for meeting future water requirements;
- details of any changes to be made to water entitlements;
- a minimum share of overland flow water which each owner of land in the resource operation plan area may take (if the resource operation plan provides for the regulation of overland flows);
- the rules for, and details of, any proposed conversions of existing water licences and interim water allocations to water allocations; and
- water allocation transfer rules.

A draft resource operation plan must be made available for public consultation. The chief executive of Department of Natural Resources and Mines must have regard to all properly made submissions in preparing the final draft resource operation plan.

To date, no resource operation plans have been developed. Draft resource operation plans for the Fitzroy River Basin and Boyne River Basin are being prepared, with the Fitzroy to be the first due for release for public comment in September—October 2001. Attachment 3 contains a timetable for the rollout of the resource operation plans.

Resource operations licences

Resource operations licences are granted under the Water Act to water infrastructure operators (for example, SunWater, local governments and private water providers). A resource operations licence outlines:

- the details of the licence-holder;
- the resource operation plan to which the licence applies;
- any water infrastructure to which the licence applies; and
- any considerations with which the licence-holder must comply, including any operating arrangements and the supply requirements of the resource operation plan that relate to the holder.

The resource operations licence may prohibit the licence-holder from changing, replacing or operating any water infrastructure if the changes to the water infrastructure are incompatible with environmental flow objectives or water allocation security objectives.

As at 31 March 2000, interim resource operations licences had been issued to SunWater for its 27 water supply schemes. They are publicly available on the Department of Natural Resources and Mines web site.

Water allocations

The Water Act provides the legislative basis for the establishment of water allocations in Queensland. A water allocation is an authority to take water in accordance with a resource operation plan and water resource plan. Water allocations are separated from land title and clearly specified in terms of ownership, volume and location. Many water allocations will be supplied by a resource operations licence-holder. If the water allocation is not managed under a resource operations licence, then the allocation also specifies the flow conditions and the maximum rate at which water may be taken. A water resource plan defines the water allocation security objectives (measures of reliability) and the resource operation plan details the rules under which the water allocation may be traded.

As outlined above, water allocations will be progressively implemented throughout Queensland as resource operation plans are implemented. Water allocations are implemented on the day a resource operation plan has effect when details of converted water allocations are also required to be recorded on the water allocations register. Water licences not converted by a resource operation plan will continue.

Ongoing monitoring for the water resource plans will help achieve the balance between the need for certainty for water allocation holders and environmental requirements. Monitoring reports will be made public. In the event amendments to water allocations are required to meet the needs of the environment, amendments will occur only following a transparent process. They must be supported by scientific evidence and will be subject to consultation.

Compensation

Any amendments that reduce the value of individual water allocations during the currency of a water resource plan are subject to the compensation provisions of the Water Act. Changes made at the end of the life of the water resource plan are not subject to compensation, although regular reporting has the potential to ensure water users are able to form a reasonable expectation about whether significant change is likely at a plans end.

Registry

Water allocations in Queensland must be registered on Queensland's water allocations register. The water allocations register will record the interests of financiers under the terms of a loan agreement and related security documentation among other information.[8] The water allocations register will be operated as a module of the Queensland Land Titling System. Interests in water allocations will be recorded using the same conventions that apply to land titles (that is tenants in common in equal shares, joint tenants, a sole proprietor, tenants in common in different shares or joint tenants inter se). Third parties will be able to record their interest on the register in the same way as they do now on the land register.

The following information will be included on the register:

- details of the person who holds, and how they hold, the allocation;
- a volume of water for the allocation;
- the location from which the water may be taken;
- the purpose for which the water may be taken including, for example, agriculture, industrial or urban uses;
- the resource operation plan under which the water allocation is managed; and
- other matters prescribed under regulation.

[8] Section 101(b) provides for third-party interests in an allocation to be recorded on the water allocations register.

In many respects, water allocations under the *Water Act 2000* have all the features of a long term lease, with ownership interests clearly registered and ownership enforceable.

The holder of an allocation notifies an intention to register a third-party interest on the register, then a 20-business day covenant on dealing with the allocation comes into effect. This means a financier such as a bank will be covered for 20 days while assessing the security of the holder of the allocation.

The Department of Natural Resources and Mines will own and operate the Water Entitlements Registration Database (WERD). WERD will record details of water licences already in operation, but is being updated to accommodate Queensland's new water licensing system under the *Water Act 2000*. The Water Allocations Register is operated by the Queensland Resources Registry and records all dealings associated with tradeable water allocations. The Water Allocations Register will commence operation upon completion of the first resource operations plan.

Water licences

Under the *Water Act 2000*, a system of water licences will continue. Water licences will exist in those parts of the State where a water resource plan and resource operation plan have not been prepared or in areas where the resource operation plan does not provide for the establishment of water allocations.

A water licence is issued (with or without conditions) for a period and states the water resource to which the licence relates and the location from which water may be drawn. The Water Act also provides for licences to be amended, renewed, reinstated, amalgamated, subdivided, surrendered or cancelled. Water licences currently have terms for extraction, but are not defined by volume.

Water licences under the *Water Act 2000* are similar to those under the previous *Water Resources Act 1989,* except they will describe a water entitlement rather than works that may be used for taking water. Licences that currently describe the water entitlement in terms of an area that may be irrigated will progressively be amended to describe the water entitlement in volumetric terms. Under a water licence, the water remains tied to the land title. The Water Act's new provisions commence in September 2001. On implementation of water resource plans in progress, water licences will account for no more than 20 per cent of all water used for irrigation, urban and industrial purposes, excluding stock and domestic water.

Appeals

Decisions in relation to an application for a resource operations licence, allocation or licence can be appealed. However, where a decision relates to a resource operation plan, an appeal can be made only to the extent that the decision is inconsistent with the resource operation plan or that a different decision could have been made consistent with the resource operation plan.

The first stage in any appeal is an application for internal review that must be made within 30 days of the person being advised of the decision. If the internal review decision is not that sought by the applicant, then the review notice must also state the reasons for the review decision. The applicant may then lodge an appeal with the Land Court.

Surface water overallocation

The National Land and Water Resources Audit's assessment of water resources 2000 (NLWRA 2001) provided data on surface water resource use for Queensland. The data do not indicate sustainable yield. While Queensland has a number of rivers where the developed yield or diversion exceeds the allocation, the Council is unable to determine if there are areas where the resource appears overallocated in relation to the sustainable yield based on the National Land and Water Resources Audit data. However, data released in Queensland's Draft Condamine–Balonne water resource plan indicates where current water use is exceeding sustainable yields in areas in this basin.

Groundwater

The National Land and Water Resources Audit assessment of water resources 2000 provided data on groundwater resource use for Queensland, including where the resource is approaching full allocation, fully allocated or over allocated in relation to the sustainable yield.[9] Queensland has advised that many of the less reliable estimates of "sustainable yield" as reported in the National Land and Water Resources Audit report were made at a time when data and estimation methods were not as reliable as those of today and did not consider the same factors as those that need to be considered as part of a water resource planning approach. Hence the quoted yield estimates should be viewed as interim and will be progressively reviewed as water resource plans are prepared.

[9] The definition of sustainable yield applied by Queensland for 'groundwater-dependent ecosystems' includes rainfall recharge, aquifer throughflow rates and extractions (or net recharge to aquifer).

Table 6: Summary of data for groundwater management units that are at/or approaching full allocation or overallocation

Groundwater management unit	*Total abstraction (megalitres)*	*Total allocation (megalitres)*	*Sustainable yield (megalitres)**
Black River alluvium	7 500	10 683	6 000d
Braeside/Nebo	2 800	4 443	2 500d
Burdekin River Irrigation Area (left bank)[1]	29 130	66 232	40 000d
Callide Valley	16 614	32 107	12 000a
Don and Dee rivers	n/a	12 966	11 800d
Don River	12 792	19 395	17 000b
Farnborough/Waterpark	1 670	1 669	1 200d
Koumala	4 000	5 640	4 000d
Pioneer River[2]	16 255	88 770	67 660c
Proserpine River	10 000	21 754	19 600c
Woongarra	17 539	37 810	30 000a
Condamine management unit sub – area 4	1 302	3 694	1 930a
Glengallan Creek	8 090	6 775	4 330a
Lower Lockyer Creek	4 000	n/a	3 000d
Nobby Basalts	3 712	2 775	2 400b
Oakey Creek Management Area	4 205	9 663	7 000b
Swan Creek alluvium	800	1 365	900b
Border Rivers	3 946	30 890	30 000b
Condamine management unit sub — area 1	2 157	3 560	1 440a
Condamine management unit sub —area 2	4 252	10 723	2 490a
Condamine management unit sub — area 3	19 179	49 562	14 810a
Great Artesian Basin[3]—Barcaldine Qld	44 170	44 170	36 310d
Great Artesian Basin—central Qld	28 000	28 000	16 680d
Great Artesian Basin—eastern recharge B Qld	37 140	37 140	32 450d
Great Artesian Basin—eastern recharge C Qld	17 950	17 950	15 690d
Great Artesian Basin—Flinders Qld	48 710	48 710	39 270d
Great Artesian Basin—Gulf Qld	21 260	21 260	18 570d
Great Artesian Basin—Mimosa Qld	15 990	15 990	13 970d
Great Artesian Basin—north west Qld	12 230	12 230	10 680d
Great Artesian Basin—Surat Qld	96 720	96 720	71 960d
Great Artesian Basin—Warrego Qld	59 400	59 400	48 960d
Weipa	63 000	210	64 000

1 The total allocation of 66 232 megalitres includes surface water allocation of some 22 000 megalitres in the Giru area. This amount was included in the NLWRA figures because of the close administration between management of surface and groundwater in the Giru area. Thus for the groundwater system alone, the actual allocation from groundwater sources is some 44 000 megalitres compared with the estimated yield of 40 000 megalitres.

2 The allocation of 88 700 megalitres includes aquifers in the fractured rock areas whereas the stated yield only applies to the area's alluvial aquifers.

3 For the Great Artesian Basin, the allocation level data identified by the NLWRA (2001) are somewhat misleading in that allocations have been made equal to abstraction levels. Current allocation levels are significantly less than the data quoted because many stock and domestic bores do not have an allocation volume and will not receive an allocation until artesian discharge in brought under control.

* Sustainable yield reliability assessment: a = highest reliability, d = lowest reliability.

Source: NLWRA 2001

Queensland uses a range of mechanisms for dealing with overallocated systems so that use is reduced to sustainable levels. In the Great Artesian Basin, for example, the first step is to reduce uncontrolled waste. New use proposals are required to save water from existing uncontrolled discharge to provide for new uses. New uses for existing water users are limited to no more than 20 per cent of the saving, with a minimum of 50 per cent of the water saved by controlling discharges retained in the aquifer to produce improved pressures, arrest pressure decline and enhance discharge to groundwater-dependent ecosystems.

The strategic management plan for the Great Artesian Basin estimates that basin-wide savings of about 200 000 megalitres per year could be made out of an estimated 500 000 megalitres per year discharge by the pastoral industry, which equates to a 40 per cent reduction in that industry's discharge.

The present mechanism used in groundwater irrigation areas, such as the Callide Valley, Condamine Valley or Pioneer Valley, is to announce annual allocations as a proportion of the total allocation or to otherwise restrict access. This mechanism is used to constrain use to levels that will maintain groundwater levels above critical points or arrest water level declines.

Queensland has conducted a groundwater risk assessment looking at existing and future problems for all systems. The Council has been provided with a report on risk assessment of Queensland aquifers in 1999 and estimates for 2003 (DNRM 2001). The document was prepared by the Department of Natural Resources and Mines groundwater assessment group to provide input into scheduling future water resource plans. It forms an integral part of an ongoing review and risk assessment of the main groundwater areas of the State. Risk assessment criteria were devised to assess the overall level of risk on each aquifer and weighted with respect to their relative importance. The report notes that accurate quantitative data for a majority of aquifers was limited.

Queensland advised that surface water resource plans are the priority and that groundwater resource plans are in the preliminary phase before commencement of the formal process. However, groundwater resource plans will be developed for the Pioneer Valley, Bundaberg (Woongarra, Gooburrum and Isis/Elliot), the Burdekin Delta, the Giru Benefited Area, the Burdekin River Irrigation Area, Atherton Basalts, the Barron Delta and Central Lockyer.

Once water resource plans are undertaken for priority areas, then other mechanisms to reduce demand on the system can be employed. Such mechanisms may involve, for example, trading, voluntary reduction, buy-back, source substitution or an annual announced proportion of allocation.

Overland flows

Under the Water Act, the Queensland Government has the capacity to exercise controls over the harvesting of overland flows and sub-artesian groundwater in planning for water resource use. Water resource plans may regulate the taking of groundwater and overland flows if there is:

- a risk that water use may have an impact on the outcomes of a water resource plan;
- an affect the availability of water to existing water users; or
- an impact on the water requirements for natural ecosystems.

Murray—Darling Basin Ministerial Council cap

At the Murray—Darling Basin Ministerial Council meeting of March 2001, Queensland reaffirmed its commitment to announcing its cap for all Murray—Darling basin valleys by mid-2001. The cap will be implemented, in accordance with Schedule F of the Murray—Darling Basin Agreement by December 2002.

The 1999-2000 Murray—Darling Basin Ministerial Council Independent Audit Group report for Queensland noted there was further growth in on-farm storages with the lower Balonne area alone increasing by 340 gigalitres representing an estimated 140 gigalitres previously unaccounted for and 200 gigalitres of new growth during 1999–2000. A moratorium notice was issued under the *Water Act 2000* for the Condamine–Balonne, Border Rivers, Moonie and Warrego, Paroo, Bulloo and Nebine that limits growth in diversions and the construction of new storages. The moratorium notices were further amended in June 2001 to clarify the moratorium provisions regarding the completion of works that have been started and to specify a date for the completion of construction of these works.

Additional assessments are underway to address other issues identified by the independent audit group. This includes the Queensland Environmental Protection Agency assessment of the Condamine–Balonne environmental flows technical report and draft plan, and the modelling of downstream impacts of the Condamine–Balonne and Moonie plans.

Submissions

The Council has received a submission from the Queensland Farmers Federation expressing continued concern about the security and tenure of water rights created under the *Water Act 2000*. The Federation expressed several concerns in that the:

- Water Act does not provide for existing water entitlements to be recognised in water resource planning. Where it is necessary to reduce existing entitlements to achieve environmental flow requirements, entitlement-holders must have an effective right of appeal and there must be provision for compensation for any adverse impacts of the plan. These impacts must be assessed and documented at the draft stage of the plan.

- Water Act has put in place a 10-year water right. The review of the water resource plans within 10 years will reopen the debate over environmental needs and could mean a further clawback of water entitlements without compensation. If the 10 year review is to remain, then entitlement-holders must have the right of appeal, with provision for compensation for any adverse impacts; and

- adequacy of the water resource plan process is questionable. (QFF 2001)

Assessment

The Council considers that it would be optimal for rights to be vested in the end user. However, where rights are not vested in the end user, the Council believes the rights must still be able to ensure a licence-holder can:

- invest in the rights;

- buy and sell the right commodity (that is, trade it); and

- plan business activities based on the surety of the rights.

For these reasons, the Council has reviewed the efficacy of property rights in terms of the following three criteria:

- First, the reliability should be specified — there should be enough information to enable stakeholders to know what they have got and to be able to trade.

- Second, the length of the right, the presumption of rollover of a right unless there is a specific need for change, and the registry system need to be adequately established to enable the right to hold a third-party interest such as a mortgage. A right does not need to be granted in perpetuity.

- Third, whether there is provision for compensation during the term of a water resource plan based on the frequency and likelihood of the need for change. If there is a low frequency need and likelihood of change based on the needs of the environment during the plan's life, then no compensation may be necessary. If there is a high frequency need for change based on environmental needs (for example, a high level of overallocation), then compensation may be payable.

The Council has further considered the provisions of the Water Act 2000 since the January 2001 supplementary NCP assessment.

In relation to the property rights system Queensland is dealing with the priority surface water resources first, then it will look at water allocation and planning in groundwater catchments. As noted in the January 2001 supplementary NCP assessment, there is no end date on water allocations and any changes to allocations.

With regard to the registry system, the Council notes that the water allocation register, based as it is on a land titling system and backed by the legal provisions of the *Land Title Act 1994* and *Personal Property Act 1974,* provides for a high level of security of rights in the form of tenants-in-common. The register will list all reported claims against the right. The Council also believes that the 20-day covenant on dealing once a notice of intent to register a third-party interest is made gives financiers sufficient coverage to decide whether to proceed with the transaction.

The Council commends the ongoing negotiations between the Queensland Government, a group of 20 financiers (including the Australian Bankers Association) and irrigators (including representatives of the Queensland Farmers Federation) concerning the machinations of the new Water Act and issues of certainty in allocations. The aim of the negotiations is to ensure arrangements will provide a sound basis for borrowing and investment. The Council notes the Australian Bankers Association had endorsed the approach taken by the Queensland Government in developing the provisions of the Water Act. Council enquiries of the Australian Bankers Association revealed an increasing acceptance by financial institutions that the new system will provide an adequate basis on which to lend.

The Water Act provides for 10-year certainty as prescribed by the length of the water resource plan. Compensation mechanisms are built in case allocations are varied. A plan provides for regular reporting on how it is performing, so there are no surprises at the end of the 10-year period.

It is worth noting that Queensland has few identified overallocated systems, so the need for change to reopen finalised plans is likely to be low. However, the Water Act does require the Minister to prepare a new plan if satisfied that a periodic report shows that a plan's environmental flow objectives or water allocation security objectives are no longer appropriate for the plan area. In these circumstances, the Minister must act before an existing water resource plan expires. In these cases, if change is needed that affects the

value of water allocations, the Council would expect to see changes made and compensation paid, as required under the Water Act.

It is therefore important for the Council to ensure the processes employed in implementing water resource plans are bona fide. The Council considers that Queensland's system of water property rights meets the requirements for this assessment. The Council will continue to review further developments in this area in future assessments.

Provision for the environment

Jurisdictions must establish a sustainable balance between the environment and other uses, including formal provisions for the environment for surface water and groundwater consistent with the ARMCANZ/ANZECC national principles.

Best available scientific information should be used and regard should be had to the intertemporal and interspatial water needs of river systems and groundwater systems.

For the third tranche, States and Territories have had to demonstrate substantial progress in implementing their agreed and endorsed implementation programs. Progress must include at least allocation to the environment in all river systems that have been overallocated, or that are deemed to be stressed. By 2005, allocations and trading must be substantially complete for all river systems and groundwater resources must be identified in implementation programs.

Jurisdictions are to consider environmental contingency allocations, with a review of allocations five years after they have been initially determined (clauses 4b to 4f).

In Queensland, water allocations for the environment continue to be addressed through the water resource plan process.

Water resource plans require that a sustainable balance be established between water consumptive use and water for the environment. To achieve this objective, the Minister for Natural Resources and Mines must consider a range of matters when preparing a draft water resource plan, including:

- national, State and regional objectives and priorities for promoting sustainable development;

- the duration, frequency, size and timing of water flows necessary to support natural ecosystems, as assessed using the best scientific information available;

- cultural, economic and social values;

- environmental values established under the *Environmental Protection (Water) Policy 1997*; and

- the public interest.

The Minister for Natural Resources and Mines must amend a water resource plan or prepare a new water resource plan if satisfied that a periodic report is showing that a water resource plan's environmental flow objectives or water allocation security objectives are no longer appropriate for the plan area. In these circumstances the Minister must act before the existing water resource plan expires.

All finalised water resource plans are the subject of this assessment (Cooper Creek, Fitzroy Basin, Burnett Basin and Boyne Basin). In addition, the Council has also examined the draft water resource plan for the Condamine–Balonne Basin released in June 2000.

In some areas of Queensland, substantially more irrigation water can be obtained only at the expense of users downstream or of stream health. While committed to a cautious approach to further allocations of water, the Queensland Government has stated, where it accepts tradeoffs in relation to environmental flow requirements to accommodate existing or future economic or social development, to show such decisions in a transparent manner.

Queensland arrangements

Water Act 2000

Chapter 2 of the *Water Act 2000* governs the allocation and sustainable management of water resources in Queensland. The purpose of the Water Act 2000 is to promote sustainable management of water and other resources and is consistent with the national principles for the provision of water for ecosystems *(*ARMCANZ/ANZECC 1996*)*. The purpose of chapter 2 is summarised in box 4.

Water resource plans are the tool for identifying the needs of the environment and the specification of water for the environment. River health is assessed are carried out during the development of draft water resource plans.

Box 4: Summary of chapter 2, *Water Act 2000*

(1) The purpose of this chapter is to advance sustainable management and efficient use of water and other resources by establishing a system for the planning, allocation and use of water.

(2) For subsection (1), **'sustainable management'** is management which:

(a) allows for the allocation and use of water for the physical, economy and social well being of the people of Queensland and Australia within limits which can be sustained indefinitely; and

(b) protects the biological diversity and health of natural ecosystems; and

(c) contributes to the following:

(i) improving planning confidence for water users now and in the future regarding the availability and security of water entitlements;

(ii) the economic development of Queensland in accordance with the principles of ecologically sustainable development;

(iii) maintaining or improving the quality of naturally occurring water and other resources which benefit the natural resources of the State;

(iv) protecting water, watercourses, lakes, springs, aquifers, natural ecosystems and other resources from degradation and, if practicable, reversing degradation which has occurred;

(v) recognising the interests of Aboriginal people and Torres Strait Islanders and their connection with the landscape in water planning;

(vi) providing for the fair, orderly and efficient allocation of water to meet community needs;

(vii) increasing community understanding of the need to use and manage water in a suitable and cost efficient way;

(viii) encouraging the community to take an active part in planning the allocation and management of water; and

(ix) integrating, as far as practicable, the administration of this Water Act and other legislation dealing with natural resources.

For subsection (1), **"efficient use"** of water:

(a) Incorporates demand management measures which achieve permanent and reliable reductions in the demand for water;

(b) Promotes water conservation and appropriate water quality objectives for intended use of water; and promotes water recycling, including, for example, water reuse within a particular enterprise to gain the maximum benefit from available supply; and

(c) Takes into consideration the volume and quality of water leaving a particular application or destination, including, for example, release into the environment.

Source: Queensland (2001a)

Environmental flows program

Under the *Water Act 2000,* a water resource plan must be prepared based on the best scientific information available. The Queensland Government has appointed technical advisory panels to provide the scientific information required as input into the development of water resource plans.

Environmental flow assessments for water resource plans are based on primarily a process of benchmarking. Benchmarking involves determining relationships between levels of departure from the natural flow regime and environmental condition. These relationships are determined from an assessment of benchmark sites. Levels of departure from the natural flow regime are quantified in terms of key hydrological indicators.

The Cooperative Research Centre for Freshwater Ecology endorsed this technique in a review of Queensland's environmental flow assessment method in February 2000 (Whittington 2000a). The output of the benchmarking process is generally presented using risk assessment diagrams. These diagrams give a graphical representation of the likely extent of ecological change as a result of flow changes. The environmental flows benchmarking technique provides a framework for the analysis of existing and predicted future environmental conditions and the river's environmental flow requirements. Flow statistics and condition assessments for benchmark sites are used to indicate the likely degree of environmental impact that would result from various levels of water resource allocation or different management scenarios.

Box 5: Key to the environmental requirements of the water resource plans

Each water resource plan sets out management scenarios or options for water allocation and use that are subject to public consultation during consideration of the draft.

The Fitzroy water resource plan, draft Burnett water resource plan and draft Condamine–Balonne water resource plan used 'environmental flow limits' and 'planned development limits' in describing environmental flow provisions. Environmental flow limits are defined as 'the levels of change beyond which there is considered to be an increased risk of environmental degradation'. Planned development limits defined as 'the level of impact against environmental flow indicators to accommodate existing and future water development'.

After advice from the Cooperative Research Centre for Freshwater Ecology, Queensland changed its approach in the final Burnett water resource plan that does not contain the environmental flow limit terminology. Instead, the Burnett plan details minimum environmental performance standards plus desired environmental performance targets within the plan's specification of environmental flow objectives. The plan gives more explicit details of intended ecological outcomes. The new performance standards provide a more rigorous basis for monitoring the outcomes of water resource plans and a more meaningful basis for the public to understand the levels of impact associated with the preferred water allocation scenario.

This approach for determining environmental flow requirements is consistent with chapter 2 of the *Water Act 2000* and will be used for all future water resource plans.

Source: Queensland (2001a)

Progress of water resource plans against the implementation program

Fitzroy Basin water resource plan

The Fitzroy Basin water allocation and management plan (DNRM 1999) was approved and finalised in December 1999 in accordance with the requirements of the Water Resources Act 1989. The plan covers allocation planning for the Fitzroy River and its tributaries, which flow to the sea at Rockhampton. Under s1041(1) of the *Water Act 2000,* this existing plan is deemed to be a water resource plan for the purposes of the new Water Act.

The Fitzroy water resource plan includes a timetable for parts of the basin where a resource operation plan will be developed. A draft resource operation plan is being prepared and are expected to be released for public consultation in September–October 2001. The resource operation plan will cover implementation of environmental flows, trading, licence conversions and monitoring and reporting requirements.

The Fitzroy water resource plan identifies benchmarks (environmental flow limits) that reflect that the system is in a reasonable, although somewhat degraded, condition. Therefore, increasing the level of flow regulation would be likely to result in significant habitat degradation. The plan specifies the water available for consumptive use taking into consideration environmental flow limits. It identifies the level of environmental impact (planned development limit) that will result from the use of that amount of water.

A key consideration in the level of allocations provided for by the Fitzroy water resource plan is the level of environmental flows at the end of the catchment. However, the plan's environmental flow limits are also achieved in most subcatchments within the Fitzroy Basin. In the Dawson and Upper Mackenzie systems, planned development limits are set below the environmental flow limits but above the significantly-to-severely impacted benchmark levels.[10] In determining the planned development limits adopted within the plan, the Queensland Government advised that it considered:

- the principles of ecologically sustainable development;
- its commitments under CoAG to ensure environmental water requirements are adequately met;
- the national principles for the provision of water for the environment;

[10] Except for two indicators on the Mackenzie River which are at or below the significantly impacted benchmark level.

- the likely long term implications for long term river health, based on the best scientific information available at the time; and

- Government and community views and expectations in relation to the environmental, economic and social implications of providing for future water development and use in the basin.

The plan provides for 23 per cent of the total mean annual flow generated by the Fitzroy Basin to be diverted or stored for consumptive use. Queensland advised that this has been adopted as a conservative measure to ensure a significant proportion of the total river discharge reaches the river estuary.

The Fitzroy water resource plan provides for additional water allocations in parts of the Basin. These include 190 000 megalitres of medium-priority water allocation in the Dawson River system, in anticipation of the proposed construction of the Nathan Dam (see section on new investment). In addition, the plan overview identifies that an additional 351 500 megalitres per year is potentially available for other uses. However, any new proposals, must demonstrate that they comply with the planned development limits. Additionally, preference will be given to those proposals that demonstrate the best possible performance under the environmental flow limits.

The Fitzroy water resource plan is to be amended to make the terminology more in line with the new Water Act. Queensland advised that the process employed in the development of the Fitzroy plan is consistent with the requirements of the Water Act.

Cooper Creek water resource plan

The first of several drafts of the Cooper Creek water resource plan was released in April 1998 and a final plan was released in February 2000 as subordinate legislation to the *Water Resource Act 1989*. Under s1038(1) of the *Water Act 2000,* this existing plan is deemed to be a water resource plan for the purposes of the new Water Act.

The plan provides for limited water resource development predominantly in the upper half of the basin and effectively places a cap on further increases on in-stream storage capacity to a maximum 7290 megalitres, including additional provision for 3000 megalitres for the Longreach water supply storage.

The general principles of the plan requires water resources to be managed:

- in a sustainable and integrated way, recognising water use impacts affecting the plan areas as a whole;

- having regard to relevant national and international obligations, including obligations relevant to South Australia; and

- having regard to the entitlement of residents in the plan area are entitled to a water supply sufficient for a reasonable standard of living and local environment.

The environmental principles of the plan are:

- that variable and seasonal water flow patterns must be maintained;

- that water resources for ecologically significant areas — including, for example, landscapes and wetlands that have a significant aesthetic, cultural, tourism or wilderness value — must be protected; and

- that if the plan area is threatened with serious or irreversible environmental damage, then measures to prevent the damage must not be postponed as a result of lack of full scientific certainty about the ecology of the area or about the impact on the ecology of failure to apply measures.

In relation to groundwater for the region, the Chief Executive Officer of the Department of Natural Resources and Mines may issue a licence or permit to take or use groundwater only if satisfied the rate at which the water is to be taken will not exceed the underground water recharge rate.

The Cooper Creek water resource plan does not include monitoring arrangements. A number of minor amendments are to be made to the plan to make the plan consistent with the Water Act. The Minister for Natural Resources and Minister for Mines has a legal obligation under section 53 of the Water Act to report on the performance of the plan. Accordingly, monitoring arrangements are in place to enable compliance with the Water Act's reporting requirements.

Boyne Basin water resource plan

The draft Boyne Basin water management plan was released in May 2000 and finalised as the first water resource plan under the Water Act. The Boyne River Basin is a small coastal river basin containing the major urban centre of Gladstone and associated industrial and agricultural developments.

The plan specifies:

- general outcomes concerning security of supply of water from Awonga Dam to users upstream and downstream of the dam;

- ecological outcomes for river reaches upstream and downstream of the Awonga Dam, including the maintenance of existing habitats and provision for marine and estuarine processes related to nutrient supply, geomorphic processes and faunal movement and reproduction;

- strategies for achieving the outcomes, including detailed releases from the Awonga Dam for environmental purposes when supply level is above a specified level, and restrictions for the taking of water upstream and downstream of the dam;

- criteria that the department's chief executive must consider when deciding whether to approve an application for a licence or permit relating to the plan. These include the intended use and availability of the water, and any potential impacts on the entitlements of other users and on the ecological value and function of instream environments and related areas such as riparian zones;

- environmental flow objectives and performance indicators. The flow objectives address flow specifications for upstream and downstream of the dam and cover matters such as trigger flows, river forming flows and flows to inundate riparian vegetation, including the specification of daily flow releases for each month the dam is above a specified level of supply;

- the monitoring requirements of the plan in relation to river flow, diversions of water, water quality and natural ecosystems;

- the monitoring requirements of the operator of the Awonga Dam; and

- the reporting requirements of the dam operator and the Minister.

A draft for the Boyne Basin resource operation plans is being prepared.

Burnett Basin water resource plan

The draft Burnett Basin water allocation and management plan was released in June 2000 and finalised as the second water resource plan under the *Water Act 2000* (DNRM 2000a). The plan covers allocation planning for the Burnett River and its tributaries, and five other rivers near Bundaberg (Isis, Gregory, Elliot, Nogo and Kolan rivers). The draft plan overview concluded that the Bundaberg groundwater area is overallocated.

The final water resource plan sets allocations for rivers other than the Burnett system, which reflect full utilisation of existing licences. For the Burnett River system on some tributaries, the allocation option selected accommodates moderate additional allocations. On other tributaries, the allocation proposal selected accommodates additional allocations of 88–110 gigalitres per year.[11]

[11] The draft plan overview noted that these allocations would result in planned development limits below environmental flow limits for some flow indicators.

The final plan provides details of intended general and ecological outcomes. The general outcomes include making water available for the environment and protecting species of significant conservation value such as lungfish and turtles. The environmental flow objectives for the management and allocation of water under the Burnett Basin Plan are to:

- maintain pool habitats, as well as native plants and animals associated with habitats in watercourses;
- maintain long term water quality suitable for riverine and estuarine ecosystems;
- provide flow regimes that favour native plants and animals associated with watercourses and riparian zones;
- reduce saltwater intrusion in the Gooburrum area groundwater system near Moore Park and the Woongarra area groundwater system near Elliot Heads;
- provide wet season flow to benefit native plants and animals, including fish and prawns in estuaries; and
- improve stream flow conditions to assist the movement of fish along watercourses.

Condamine–Balonne Basin draft water resource plan

The draft Condamine–Balonne water resource plan overview was released in June 2000 (DNRM 2000b). Over 200 submissions were received on the draft plan. Also available on the Department of Natural Resources and Mines web site are technical documents covering environmental flows, hydrology, current conditions, indigenous issues and a community reference panel report.

The water resource plan will apply to the following water sources in the plan area:

- water in each watercourse, lake or spring;
- water conserved by a dam or weir constructed in, on or over a watercourse, lake or spring; and
- overland flow water within defined areas.

In relation to groundwater, the draft plan overview states:

> *… as the draft Plan provides for only limited additional allocation of surface water resources, it is expected that pressure will increase to further develop the groundwater resources, including the alluvial aquifers from Killarney to Macalister, the St George alluviums, the*

Great Artesian Basin and related groundwater resources. ... However, as pressure increases for greater use of groundwater, there may be a need to extend and amend the water resource plan in the next three to five years to address groundwater allocation and use. (DNRM 2000b, p.15*)*

The draft plan presents three scenarios for establishing environmental flow objectives defined in terms of performance indicators that relate to environmental flow limits (the level below which there is an increased risk of unacceptable environmental degradation) and planned development limits (the levels of development from the environmental flow limits that would accommodate existing and future water development and water usage in the Condamine–Balonne Basin) as presented in Box 6 below:

Box 6: The Condamine–Balonne draft water resource plan scenarios

Scenario A—Adopt planned development limits that are no lower than those associated with the mid-1999 level of water resource development throughout the basin.

Scenario B—Partially improve planned development limits towards the environmental flow limits, particularly at the downstream end of the basin.

Scenario C—Improve planned development limits throughout the basin towards levels associated with the 1997 level of water resource development.

The overview considers the three options for change against six key flow statistics: median annual streamflow, the overall pattern of flow regime, consideration of the high-flow and medium-flow frequency, and the duration percentile for low-flow and no-flow scenarios.

The information is presented for 16 management nodes including three flow nodes in New South Wales. A further five flow statistics are presented for Narran Lakes, allowing 101 points of comparison between 1993-94, 1999 and projected levels of diversions under scenarios shown in the draft plan with the environmental flow limits.

The Condamine–Balonne water resource plan is expected to be finalised by September 2001. A resource operation plan will then be developed in consultation with water users and other stakeholders to operationalise the water resource plan.

Other submissions

The Council received submissions from the Queensland Conservation Council, the World Wide Fund for Nature and the Queensland Farmers Federation.

The Queensland Conservation Council raised the following concerns:

- the Government is actively choosing to make decisions that fail to comply with the environmental requirements of the CoAG water agreement. For example, in the Burnett and Fitzroy basins will result in environmental flows not being met. Further, both these regions are recognised in the national action plan on salinity;

- the water resource plan process is fine in theory, but there are concerns with the application in practice;

- the water resource plans for the Burnett, Fitzroy and Condamine–Balonne Basins fail to conform to the definition of 'sustainable management' under the *Water Act 2000;*

- none of the three water resource plans meets the identified environmental flow targets specified in the plans, nor do they protect biological diversity, the health of ecosystems intergenerational equity or meet the precautionary principle;

- three out of four water resource plans allow for larger dam developments;

- the only finalised water resource plan to specify ecological outcomes is that for the Burnett Basin, and these outcomes appear to be motherhood statements only. They are not defined prescriptively, thereby undermining the ability of the plan to achieve those outcomes and to retain the ecological integrity intended within the *Water Act 2000;*

- the Condamine–Balonne water resource plan scenarios all fail to save the Narran Lakes. Even the best scenario only allows for 40 per cent of flows to be returned to the Narran Lakes, which is ecologically insufficient;

- where planned development limits fall below environmental flow limits, there is an increased risk of unacceptable environmental degradation; and

- the Queensland water resource plans fail against the National Principles for the Provision of Water for Ecosystems. (QCC Submission)

The main concerns raised by the Queensland Farmers Federation relate to difficulties with the implementation of water resource plans:

- the plans are not based on an adequate database regarding existing development and environmental condition;

- the adequacy of the technical analysis on which water resource plans are based is questionable;

- the water resource plans are not easily understood and their outcomes at the local level are too uncertain. The plans will become law before the irrigators know their entitlements under the plans. Attempts to translate

the plans have been inadequate, particularly in terms of the likely impact on entitlements;

- no economic and social impact assessments were undertaken;
- there is no provision for structural adjustment assistance for dealing with the impacts of the plans, including no preparation of an adjustment plan as part of the water resource plan;
- the conduct of overland flow planning was not explained;
- consultation must be improved, because community reference panels are ineffectual; and
- assessment of future water development needs was inadequate. (QFF Submission)

The World Wide Fund for Nature made a submission on the draft Condamine–Balonne Basin water resource plan. It raised the following concerns that the:

- plan does not comply with the Queensland Government's own legislation, so the measures to achieve sustainable water use will not be delivered on the ground;
- Condamine–Balonne Basin became overallocated only recently and subsequent to Queensland signing intergovernmental agreements committing to sustainable water resource use under CoAG;
- scenarios under the draft plan will not result in a sustainable balance between environment and consumptive uses;
- Queensland Government commissioned expert scientific advice on environmental requirements but ignored it in plan scenarios with no sound justification;
- Queensland Government is consciously planning to cause significant environmental damage;
- Queensland Government has made little attempt to develop strategies and mechanisms to meet recommended environmental flows;
- Queensland Government has not completed its study into economic impacts to justify its position that meeting the environmental flows would cause too much economic impact. Further, the work being done may be significantly flawed and may not provide a sound basis for decision-making;
- Queensland Government is not willing to invest sufficiently to achieve the reform agenda with acceptable social impacts; and

- monitoring and review mechanisms are insufficient to ensure allocations are adequate and responsive to new information or changed circumstances. (WWF Submission).

The Greens submission on the draft Condamine-Balonne WRP made the following points in relation to the lower Balonne region:

- infrastructure is not being operated in accordance with licence conditions. The Department is permitting some irrigators to extract far more water than is possible under licensed conditions. The draft WRP accommodates such increased diversion. Reports from the Department suggest they will be accommodated in the cap to be announced in June;

- Government is discriminating between public and private infrastructure in capping existing entitlements. Private development is being more favourably catered for under the draft WRP. (The Greens submission).

Discussion

The development of water resource plans in Queensland is a significant undertaking by the Department of Natural Resources and Mines. The department has been active in seeking ways in which to improve approaches to developing their understanding of relationships between flows and ecological health. It commissioned the Cooperative Research Centre for Freshwater Ecology who are considered experts in this field to assist in further refining the process. The centre also produced publicly available reports covering two topics: *Development of relationships between flow regime and river health* and *Technical review of elements of the WAMP [water allocation and management plan] process of the Queensland DNRM* (Whittington 2000b). In addition the department commissioned consultants to undertake a brief appraisal and evaluation of the consultation and community engagement processes employed during the development of water resource plans (see section on public consultation).

Unlike the south-eastern States, most of Queensland's rivers have relatively low levels of water allocations. Queensland is at the source of the Murray River and 70 per cent of all Queensland systems are coastal systems. In those catchments/rivers where water resource planning has occurred or is underway, consumptive use is typically assessed as reducing end-of-system mean annual flow by between 1 to 25 per cent—that is 75 to 99 per cent of mean annual natural flows arrive at the catchment mouths. The notable exception is the Condamine–Balonne system, where end-of-system flows have been reduced by up to 55 per cent, and the Border Rivers catchment where end-of-system flows have been reduced by up to 40 per cent. For both the Condamine–Balonne and the Border Rivers catchments, moratoriums are now in place under the Water Act to prevent the issue of new licences to extract water, and to restrict the construction of new works likely to lead to an increase in water diversions while the water resource plans are being finalised.

For this assessment, the Council is looking for governments to demonstrate 'substantial progress' against their implementation programs on the ground. This includes at least allocations in all river systems that are overallocated or deemed to be stressed. The implementation programs are to be substantially completed by 2005 for all nominated river systems and groundwater.

In the Council's second tranche NCP assessment, Queensland advised that it had no stressed or overallocated systems that required action by June 2001. Consequently, the Council has examined the particulars of each of the finalised water resource plans in terms of whether the area covered is stressed or overallocated, and to address any concerns raised by submissions.

There have been submissions over many years on some of these water resource plans, particularly, the Fitzroy Basin water resource plan. The Council also noted in the supplementary assessments (June 2000, January 2001) that for the 2001 NCP assessment, it would be looking to ensure that all water resource plans (including the Fitzroy Basin and Cooper Creek plans) are consistent with CoAG agreement and the objectives of Queensland's Water Act.

It is not the Council's role or intention to scrutinise the detail of every water resource plan. Rather, these provide useful information on the effectiveness of the Queensland's regime. With these preliminary comments in mind, the Council has examined the plans against the ARMCANZ/ANZECC national principles for the provision of water for ecosystems.

In all water resource plans prepared to date, the Environmental Protection Agency has independently reviewed the environmental flows for some water resource plans and will provide input into the development of future water resource plans. Other agencies, such as State Development, Premiers Department, the Department of Local Government and Planning and Treasury brief their respective Ministers as part of the Cabinet process. These briefs are Cabinet-in-confidence documents. The Queensland Government then considers the final plan and makes a decision about the acceptable level of impacts.

Fitzroy basin water resource plan

The Queensland Government considers that the traffic light diagrams of the Fitzroy water resource plan show at what level of allocations there is an increased risk of degradation. This does not mean that extractions are not sustainable. The environmental flow limit is an attempt to identify the level below which there will be an increased risk of degradation. The question of what is an unacceptable risk is a question for government. There is no cliff (the level below which everything fails); instead, the environmental flow limits look at what is a reasonable benchmark across the basin. They provide a transparent process to show the level of risk.

The Council notes that the Fitzroy plan was the first water resource plan developed, and acknowledges the constant attempts Queensland has made to improve the process since the plan was finalised, including the incorporation in later plans the results of several independent reviews by the Cooperative Research Centre for Freshwater Ecology.

The Cooperative Research Centre for Freshwater Ecology have also examined the outcomes of the Fitzroy water resource plan. The Centre has reached the general conclusions that the plan has adequately considered issues on a basin wide basis. The overall system is not being highly developed (around 20 per cent of mean annual discharge) which the Centre has accepted is modest in comparison to water developments in other basins in Australia.

The Council accepts Queensland's view that allocations overall adequately consider environmental requirements. However, the Council notes the minimum environmental performance standards set for several components of environmental flows for two nodes in the Fitzroy water resource plan are in the region where there is an increased risk of unacceptable environmental degradation or where significant environmental degradation is likely.

The Council is aware of several inconsistencies between the Fitzroy water resource plan and the requirements of the Water Act 2000, and accepts Queensland's advice that the Fitzroy plan will be redrafted to make terminology more in line with the new Water Act.

After looking at work completed by Professor Cullen and noting the Fitzroy plan was the first of its kind, the Council has confidence that the water resources plan meets CoAG commitments. The Council will consider progress in finalising and implementing the Fitzroy resource operation plan in the assessment in 2002.

Cooper Creek water resource plan

This water resource plan was developed under the former *Water Resources Act 1989* and, as such, the plan is not fully consistent with the *Water Act 2000*. Queensland has advised that minor amendments will be made to make the plan more consistent with the Water Act. The Council considers the allocations proposed in this plan provide adequate protection for water-related ecosystems in the Cooper Creek Basin, including those in South Australia.

Boyne Basin water resource plan

The Council has concluded that the allocations proposed in this water resource plan provide adequate protection for water-related ecosystems.

Burnett Basin water resource plan

The Queensland Conservation Council submission argues that Queensland has chosen to approve additional allocations that breach the environmental flow limits that are the measure of sustainability. By willingly breaching the environmental flow limits, the Government has chosen to further degrade the ecological values of the catchments within the Burnett Basin.

The Council notes that planned development limits in some instances were set to accommodate new water allocations, often for new water infrastructure developments. The overview document of the draft water resource plan indicates that these allocation scenarios do raise the risk of major impacts on the environment.[12] However, the indicated impacts of allocations do not include any consideration of possible environmental flow release strategies implemented under a resource operation plan which could reduce this risk. The allocations made available in the plan do not provide for the full level of allocations for the proposed Paradise Dam, which the Premier committed to investigate in January 2001. The Council understands that amendments would need to be made to the water resource plan to allow for such allocations to be announced.

The Cooperative Research Centre for Freshwater Ecology report stated:

> *It appears that the EFL [environmental flow levels] line represents an unacceptable risk of relatively minor impact when compared to the levels of impact in many rivers in south-eastern Australia* (Whittington 2000a p.20-21)

Further, in a report to Environment Australia, the CRCFE stated:

> *The process of setting environmental flows is adaptive, and the results from water resource plans, resource operation plans and monitoring of ecological outcomes are yet to be seen. The risk assessment framework used in benchmarking is likely to result in maintenance and/or improvement of the condition of river reaches in many instances. In some instances the recommended limits to change in flow regime (environmental flow limits) may not be achieved. In these instances, there is a risk that river condition may deteriorate.* (Environment Australia 2001, unpublished, p.59)

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12 Particularly those on the Boyne and Kolan Rivers.

The Council has examined the technical information related to the water resource plan and notes the existing geomorphological and/or ecological condition of some reaches of several rivers has likely suffered major impacts from existing water resource development. In recognising this, the plan lists specific ecological outcomes for some rivers in the basin; for example, water in the Kolan River Basin is to be managed and allocated to maintain and improve:

- existing riverine habitat, that sustain native plants and animals in the basin;
- existing estuarine habitats, particularly in fish habitat areas, that sustain native plants and animals and that depend on estuarine processes; and
- river-forming processes in the basin.

A draft Burnett resource operation plan is due in 2002. This plan will cover implementation of environmental flows, trading and licence conversions. The Council also notes that the Cooperative Research Centre for Freshwater Ecology, in a report to Environment Australia, stated:

> *The water resource plan for the Burnett Basin is developed upon sound ecological principles ... Most importantly, the process is transparent and well documented and can be easily accessed, assessed and critiqued.*
>
> *If the plan is implemented in its entirety it will provide a commendable example of an environmental planning processes.* (Environment Australia 2001, unpublished, p.161)

The Council considers that the processes identified in the Burnett water resource plan provide adequate direction to guide the development of the Burnett Basin resource operation plan. The Cooperative Research Centre for Freshwater Ecology is broadly happy with the Burnett water resource plan, noting that the situation would deteriorate if parts of plan were not implemented. Thus the Council is satisfied that the Burnett water resource plan meets water reform requirements. The Council may consider the implementation actions proposed in the resource operation plan to ensure ecological sustainability in future assessments.

Draft Condamine–Balonne Basin water resource plan

Queensland agreed that current information indicates that this system may be stressed. Mean annual flow for the Condamine–Balonne is similar to that of stressed rivers in the southern States. The draft water resource plan states that:

> *Total long-term flows from the basin have declined to the extent that they now, in total, represent approximately 45 per cent of the natural mean annual flow. This is of the same order as some of the Murray—*

> *Darling Basins in NSW that have experienced major flow-related environmental degradation.* (DNRM 2000b, p.19)

Consequently, this area is now Queensland's first priority for finalising the water resource plan. The Murray—Darling Basin Ministerial Council cap will be in place mid-year and the plan will be finalised in September 2001. The resource operation plan for the Condamine will be finalised, consistent with the Murray—Darling Basin agreement, by December 2002.

The Council notes that the draft water resource plan is yet to be endorsed by the Queensland Government and current practice shows that the water resource plans are often different to the provisions set out in the draft. The draft water resource plan therefore has the status of being no more than a proposal to the community from the Department of Natural Resources and Mines as to how water might be allocated and managed. The Council will further consider the issues raised in submissions received for this assessment when it reviews Queensland's progress once the final plan has been prepared and endorsed by the Queensland Government.

It is the general policy of the Council not to comment on draft policies or plans. However, in this case:

- the Condamine–Balonne Basin is a region of intensive water use within Queensland's area of the Murray—Darling Basin;
- data now exists to justify the inclusion of the Condamine–Balonne as a stressed river system; and
- the Condamine–Balonne region contains 20 per cent of all Murray—Darling Basin wetlands. Adequate water supply from the Queensland area of the Condamine–Balonne Basin is fundamental for maintaining the ecological health of the Narran Lakes which is, a wetland of international importance under the RAMSAR convention.

The Council notes that after the signing of the CoAG Water Reform Framework in 1994, there was extensive and ongoing development and use of water resources in the Condamine–Balonne Basin until a moratorium was imposed in 2000. In particular, data from the draft water resource plan show that:

- the Condamine–Balonne river system was in reasonably good condition in 1993/94, is now one of Australia's most heavily extracted waterways and in a situation of overallocation;
- off-stream storages associated with water harvesting increased from 247 000 megalitres in 1993-94 to 827 000 megalitres in mid-1999;
- overland flow diversions resulted in storages jumping from 43 000 megalitres in 1993-94 to 115 000 megalitres in mid-1999;

- despite a moratorium on new licences being in place for five years, mean annual diversions rose from 385 000 megalitres in 1993-94 to 647 000 megalitres in mid-1999; and

- 60 per cent of the median natural flows reached Narran Lakes in 1993-94, falling to just 24 per cent by 1999.

The current and projected ecological condition of water-dependent ecosystems in this part of Queensland are summarised in the overview of the draft water resource plan as:

> *In summary, the existing ecological condition and environmental flow assessments have raised serious concerns regarding the long-term ecological sustainability of the basin's flow regime. At the end of the system, the river health has been assessed as poor, the environmental flows associated with the existing level of development have also been generally assessed as poor, and it is expected that the ecological impacts associated with this development have not fully emerged at this time. The long-term supply security for water users is also considered at risk as a result… the existing ecological condition and environmental flow assessments have raised serious concerns regarding the long-term ecological sustainability of the basin's flow regime.* (DNRM 2000b, p.19)

Concerning the three flow scenarios in the draft water resource plan the overview of the draft water resource plan stated:

> *It should be noted that none of the scenarios are expected to restore all environmental flow performance indicators back to the environmental flow limits during the life of this plan. To achieve this would require an average reduction over the long-term in current water diversions throughout the basin of over 40 per cent, a change considered unlikely to be achievable within the life of this Plan without major adverse social and economic impacts.* (DNRM 2000b, p.21)

The Council notes that the independent audit group of the Murray—Darling Basin Ministerial Council in their June 2000 report an 'Audit of Queensland draft water resource plans' has made the following comments in its preliminary analysis of the draft water resource plan:

- the draft water resource plan inadequately considers downstream impacts on Narran Lakes;

- the projected flows downstream of St George under all three draft water resource plan scenarios are less than that required for environmental flows associated with healthy rivers;

- there was no assessment of the flow or environmental impacts downstream in the Barwon-Darling system. Detailed modelling of these impacts is required and will be conducted by New South Wales;

- in setting of environmental flow limits and the testing of scenarios a higher risk of environmental impact was judged to be acceptable; and

- each scenario, however, improves environmental flow outcomes compared with outcomes from no intervention. (MDBC 2000)

The Council has not conducted a full analysis of the Condamine–Balonne Basin water resource plan for this assessment because the water resource plan is still a draft. However, the Council believes on the evidence before it, including the findings of the independent audit group, indicates that the lower portion of the basin should now be considered a stressed river. Accordingly, the tripartite meeting required action on all stressed rivers by the 2001 NCP assessment. However, the data on the Condamine–Balonne only recently became available. The Queensland Government has committed to the Murray—Darling Basin Ministerial Council cap in June 2001 and to operationalise that commitment in finalising the Condamine–Balonne water resource plan by September 2001. Further, the Council understands that the Independent Audit Group will be given an option to view the final draft of the water resource plan before the Queensland Government considers and finalises the plan in September 2001.

The Council has serious concerns with the three options proposed in the draft water resource plan. The independent audit group has argued that this system, a waterway in relatively good condition in 1995 is now one of Australia's most regulated waterways.

Queensland argued that the changes in the environment that are purported in the draft water resource plan are yet to happen. Only in the last two to three years has development in the region been at the level that the plan says will have an impact on the environment. The plan predicts what would happen if this level of development continues. It also needs to be recognised that the effects are lagged. It could be 10 or more years before the current level of development would have an observable impact on the Narran Lakes.

Queensland is exploring options for better science and looking at artificial measures to achieve environmental outcomes. This would allow the science to be developed progressively and further strategies to be implemented along the way.

The ecological evidence of the downstream impacts of the three flow options presented under the water resource plan cast considerable doubt that any of the scenarios presented in the draft water resource plan will be adequate to meet the environmental needs for the lower Balonne Basin and the RAMSAR-listed Narran Lakes wetlands in northern New South Wales. The Council is also concerned that the draft plan does not include all overland flow harvesting and does not address groundwater resources.

Based on the information currently before the Council, it is of the view that, if the water resource plan is finalised in its present form, then it may be appropriate to recommend a substantial penalty at the next NCP assessment for noncompliance with reform commitments. The penalty, to be decided at the time, would be based on the importance of this reform commitment, and the impacts of this water resource plan not only in Queensland but also in New South Wales.

A key requirement of the CoAG water reform agreement is to ensure action is taken where river systems are overallocated or stressed, to provide a better balance in water resource use. Such action includes appropriate allocations to the environment to enhance or restore the fundamental health of river systems. The Condamine–Balonne water resource plan needs to provide for deliverable milestones to achieve this objective. The Council is conscious that reductions in water usage have the potential for economic and social dislocation. Such issues need to be taken into account in deciding how to implement reform.

For the next assessment, the Council would expect Queensland to have a final water resource plan in place for the Condamine–Balonne that is consistent with CoAG water reform commitments and that development of the associated resource operation plan would be well underway.

National Principles for the Provision of Water for Ecosystems

The following discussion covers the ARMCANZ/ANZECC national principles of water for ecosystems that are relevant to this assessment.

Principle 1:River regulation and/or consumptive use should be recognised as potentially impacting on ecological values.

The development and implementation of the water resource plans as well as resource operation plans, recognises of the potential and actual impact of river regulation and/or consumptive uses on ecological values. In all water resource plans examined, the Council has found that in developing scenarios the Queensland Government actively considered the impact of additional allocations and the associated effects on the environment.

The Council is satisfied that Queensland is meeting this commitment.

Principle 2:Provision of water for ecosystems should be on the basis of the best scientific information available on the water regimes necessary to sustain the ecological values of water-dependent ecosystems.

In all water resource plan processes to date, technical advisory panels were appointed to provide the scientific input into the development of the water resource plan. The *Water Act 2000* specifies that the water resource plan must be prepared based on the best scientific information available.

The World Wildlife Fund submission argued that the Queensland government, despite obtaining expert scientific input, has ignored the advice and is consciously planning to cause significant environmental harm. The Queensland Conservation Council submission expressed similar views.

To date, environmental flow assessments for water resource plans have been based on primarily the process of benchmarking. The Cooperative Research Centre for Freshwater Ecology endorsed this technique in its review of Queensland's environmental flow assessment method in February 2000.

The scientific information compiled by the technical advisory panels, any independent audits conducted by the Queensland Environmental Protection Agency, and the community advisory panels are all important inputs into decision-making by the Queensland Cabinet. The Council considers that the best scientific advice has been made available to the developers of the water resource plans in reaching allocation decisions and determining the balance between consumptive and non-consumptive use. The Queensland Government must also consider all matters stated in s47 of the Water Act, including social and economic values of the community and cultural, economic and social requirements, when considering the States water requirements. The Council is satisfied that Queensland is meeting this principle.

Principle 3: Environmental water provisions should be legally recognised.

Under the requirements of the *Water Act 2000*, water resource plans must state ecological outcomes. The resource operation plans must also state how they will sustainably manage water and address outcomes specified in the water resource plan. Water resource plans become subordinate legislation under the Water Act. Thus, the Council considers that the water resource plan process legally recognises environmental rights to water.

Principle 4: In systems where there are existing users, provision of water for ecosystems should go ***as far as possible*** *to meet the water regime necessary to sustain the ecological values of aquatic ecosystems whilst recognising the existing rights of other water users.*

Queensland advised the Council that:

> *The Resource Operations Plan being prepared for the Fitzroy Basin will determine whether, and if so how, any additional water allocations should be made available. It is a requirement of the water resource plan that additional allocations only be granted if consistent with attaining the environmental flow objectives and water allocation security objectives specified in the water resource plan. In the context of the terminology used in more recent water resource plans such as the Burnett the environmental flow limits identified in the Fitzroy water resource plan represent desired environmental performance while the planned development limits identified in the Fitzroy water resource plan represent minimum environmental performance standards. Accordingly, to be compliant with the water resource plan, any future water resource allocation will need to meet minimum environmental performance standards.* (Queensland 2001b, unpublished)

The Council notes the minimum environmental performance standards set for several components of environmental flows for two nodes in the Fitzroy water resource plan are in the region where there is an increased risk of unacceptable environmental degradation. The World Wide Fund and Queensland Conservation Council both contended that the Queensland Government fails to meet this principle and cited major allocations proposed to allow for water infrastructure developments in both the Fitzroy and Burnett basins.

The Council notes that the Burnett water resource plan states that water should be allocated outcomes to particular river systems to maintain and improving existing habitats and river-forming processes. Further, the Fitzroy water resource plan, like the Burnett water resource plan, requires water to be managed in an integrated and sustainable way to provide for environmental water requirements for aquatic ecosystems in the plan area.

The Council notes the water resource plans are to be implemented by resource operation plans and that none of the operation plans are advanced enough for examination. Accordingly, the Council will defer further examination of compliance with this principle until the next assessment.

*Principle 5: Where environmental water requirements cannot be met due to existing uses, action (including **reallocation**) should be taken to meet environmental needs.*

Previously Queensland has claimed none if its rivers are stressed and, therefore, water does not need to be reallocated away from existing users. However, emerging evidence indicates that the lower half of the Condamine–Balonne system could be considered to be a stressed systems. The Council notes that CoAG commitments required allocations to the environment in stressed and overallocated rivers by June 2001. The Council considers, given the process for the Condamine–Balonne system is underway and information on the allocation status of this river system has only recently become

available, that action to reallocate water to the environment should occur by 2002.

Progress on the finalisation of water resource plans for some priority river basins has slipped behind the schedule proposed in the second tranche NCP assessment. Queensland's position is that the new timetable reflects improved knowledge of the time necessary to complete a water resource plan. The updated timetable reflects improved knowledge of the technical and scientific work requirements, the time to be allowed for public consultation on draft water resource plans, and the planning process requirements of the Water Act. The updated timetable also reflects the time required to complete water resource plans following consultation on a draft water resource plan, particularly where some modification is required.

The Council will look to Queensland's response to the Condamine–Balonne water resource plan to assess whether these criteria have been met. Given Queensland is treating this issue as a priority, the Council will review this water resource plan against this principle in the 2002 NCP assessment.

Principle 6: Further allocation of water for any use should only be on the basis that natural ecological processes and biodiversity are sustained (i.e. ecological values are sustained).

The full implementation of the water resource plan process in the future should provide opportunities for long term protection of existing aquatic values. The Council notes that resource operation plans being prepared will enable full implementation of the water resource plans and will examine compliance with this principle in the 2002 NCP assessment.

The Queensland Conservation Council argues that the Queensland Government in two of the four finalised water resource plans (the Burnett and the Fitzroy), chose to approve additional allocations that breach the environmental flow limits which are the measure of sustainability. By willingly breaching the environmental flow limits, the Government chose to actively further degrade the ecological values of the catchments within the Burnett and Fitzroy basins.

The Council has examined the water resource plans that have been finalised as well as the draft Condamine–Balonne water resource plan (see previous discussion). Based on that analysis the Council is satisfied that Queensland is meeting this principle.

Principle 7: Accountabilities in all aspects of management of environmental water provisions should be transparent and clearly defined.

Water resource plans are the basis for defining water required environmental flows and must contain a clear statement of environmental flow objectives.

The Minister for Natural Resources and Mines is required to prepare a regular report (irrespective of whether a resource operation plan has been implemented) on the water resource plan, including whether environmental flow objectives are to be met. The water resource plan outlines the frequency of reporting required.

A water resource plan applies from the time it is approved. Any water management decisions made by the Minister for Natural Resources and Mines or the Chief Executive of the department following the making of a water resource plan, including before a resource operation plan is implemented, must be consistent with the water resource plan. The Council is satisfied that Queensland is meeting this principle.

Principle 8: Environmental water provisions should be responsive to monitoring and improvements in understanding of environmental water requirements.

The Water Act calls for all water resource plans to state ecosystem monitoring requirements and ecological outcomes. Resource operation plans must state the water and ecosystem monitoring practices that will apply to the proposed plan area. Water use plans must also state monitoring requirements.

The Queensland Conservation Council and World Wide Fund submitted that Queensland has not met this principle. The latter argued that while some provisions are in place, and mechanisms for review do exist, these are likely to be flawed such that environmental water provisions will not be responsive.

Queensland's position is that the Minister for Natural Resources is legally obligated under the Water Act to assess whether a water resource plan's objectives (including environmental flow objectives) are being met. That is, the Minister must ensure that adequate information is made available.

Queensland also indicated that the monitoring requirements associated with water resource plans and resource operation plans will augment and integrate with ambient stream flow, water quality and ecological monitoring activities undertaken by the Department of Natural Resources and Mines, and with the programs of other agencies such as the Environmental Protection Agency and the Department of Primary Industries. Further, the Department of Natural Resources and Mines is undertaking detailed scientific assessments to determine how future monitoring programs can best be targeted to ensure the data collected are relevant and applicable to the evaluation of the performance of water resource plans. A key component of this work is the identification of those indicators of ecological health that can be attributed to stream flow regime modifications as opposed to other non-hydrologic impacts. This project is being implemented as a pilot program in the Condamine–Balonne Basin and, if successful, will be applied to other systems in the State.

Given the work being undertaken by Queensland on the arguments of the World Wide Fund and Queensland Conservation Council, the Council will follow the application of this principle as further developments occur over the period before the next NCP assessment. In doing so, the Council will seek to examine resource operation plans, monitoring reports and any other relevant documents.

Principle 9: All water uses should be managed in a manner which recognises ecological values.

The Water Act provides a process for the long-term protection of existing aquatic values. Water resource plans contain statements of ecological outcomes that, at a minimum, require the maintenance of habitats and associated biota. However, the Council is aware that full implementation of the water resource plans will be through the resource operation plans and will examine this principle again once resource operation plans and monitoring and implementation reports become available. The Council is satisfied that Queensland is meeting this principle.

Principle 10: Appropriate demand management and water pricing strategies should be used to assist in sustaining ecological values of water resources.

Resource operations licences contain conditions to address externalities, and there is scope for these costs to be passed on to customers. Other strategies for demand management are being considered in regional and catchment management strategies across Queensland (see the section on environment and water quality). The Council is satisfied that Queensland is meeting this principle.

Principle 11: Strategic and applied research to improve understanding of environmental water requirements is essential.

The Department of Natural Resources and Mines is actively involved in quantifying relationships between the flow and ecological condition of rivers through its own Resource Science and Knowledge group. The Department has also commissioned independent reviews to ensure its basis for making allocations is derived from the best scientific information available. A review by the Cooperative Research Centre for Freshwater Ecology noted the value of the department's methods for developing ecological condition-flow relationships and for critically assessing water quality.

The Department is also undertaking scientific investigations to improve knowledge of how changes in both land use and flow regimes affect the ecological health of Queensland's rivers. The assessments will examine how various indicators of ecological health respond to changes in environmental conditions. This will enable identification of the most suitable indicators for

measuring the impacts of environmental change. Ultimately, this will allow the separation of the impacts resulting from flow changes from those resulting from land use changes. This work is intended to build on and strengthen the scientific basis for designing and applying environmental flow requirements.

Principle 12: All relevant environmental, social and economic stakeholders will be involved in water allocation planning and decision-making on environmental water provisions.

The use of community reference panels containing all relevant stakeholders is a feature of the development and implementation of water resource plans and resource operations plans. These plans are subject to full public consultation. The Queensland Conservation Council argue that the department failed to implement the recommendations in the report Review of Community Engagement Processes in Preparation of Water Allocation and Management Plans (DNRM 2000d).

Queensland advised the Council that in response to this report it is looking at changing its process for stakeholder consultation on the water resource plans to make the process more effective. In the Mary and Burdekin basins, for example, the Department is asking the communities how they want to be involved in the water resource plan process. The options include a:

- community reference panel;
- stakeholder consultation;
- mix of the first two options (an approach used in the past); and
- mix of first two options with the work of the community reference panel compressed into, say, one week towards the end of the water resource plan process. The panel would be provided with all of the technical data and submissions, and would discuss the options that the government should consider. That process would involve a facilitator and expert advisors.

The Department believes that the fourth option will make better use of the community's time. They will still consult generally but will also provide the reference panel with all of the information at one time and in an environment that will help the group to confront the difficult issues. The Mary region is looking seriously at the fourth option.

The issue of the lack of transparency between the data released in a draft water resource plan and the outcomes and final form of a water resource plan as legislation was raised with Queensland. The Queensland Government provided a commitment to bolster the s51 report to still include a summary of the issues raised during the consultation process and how those issues were dealt with in coming to the final plan. It will also provide a summary of the approved plan with its implications and a discussion of the aspects of the

approved plan that are significantly different from the draft plan. This may require the legislation to be amended (see the section on public consultation).

Assessment

Queensland adopted a basin-wide approach in the water resource plan process. The CoAG water agreements and all other states are tackling this issue using an individual river/tributary approach, that is, the agreements call for action on stressed river systems. The Council has accepted Queensland's basin approach. However, Queensland needs to demonstrate that the water resource plan system is generating comparable outcomes. The report of the Queensland Environmental Protection Agency noted the difficulty in the basin-wide approach of demonstrating consistency of scenarios with the Water Act and CoAG commitments.

The Water Act provides for the setting of environmental flows. The science used in the benchmarking studies conducted by technical advisory panels is acknowledged as some of the best science available. However, issues have arisen in how that framework is applied and how the Government decides the amount of water available for irrigation. There are also questions relating to some of the outcomes, which have created uncertainty about what the process is delivering.

The Council considers that a lot of this uncertainty has stemmed from a lack of transparency in decision-making. If the transparency of decision-making could be improved, then the need for acute scrutiny of the water resource plans would be alleviated. The Queensland Government recognised there is a perception of the lack of transparency between a draft and final water resource plan. Queensland committed to bolstering the s51 report to the public to provide a summary of the approved plan and its implications, and to address those aspects of the final water resource plan that are significantly different from the draft water resource plan. The Council supports this initiative.

The process of setting environmental flows is an adaptive one and the Council has concluded that the results from water resource plans, resource operation plans and monitoring of ecological outcomes are yet to be seen. The resource operation plans implement the environmental flows in water resource plans; in the interim before a resource operation plan is established, water resource plans guide water management and therefore are effective from the time of finalisation. The Council will consider implementation actions proposed in resource operation plans in future assessments.

Queensland has few identifiable stressed rivers, the Condamine–Balonne being the notable exception. Therefore, under the CoAG agreements these issues do not need to be resolved until 2005. However, in relation to the Condamine–Balonne water resource plan, the Council considers this to be a stressed system. Based on the information currently before the Council, it is of the view that, if the water resource plan is finalised in its present form,

then it may be appropriate to recommend a substantial penalty at the next NCP assessment for non-compliance with reform commitments. Before the next assessment, the Council expects Queensland to have finalised the water resource plan for the Condamine–Balonne consistent with CoAG water reform commitments and to have the associated resource operation plan well underway. The Council considers that Queensland has met its commitments for this NCP assessment.

Water trading

Governments agreed that water trading arrangements should be in place so as to maximise water's contribution to national income and welfare, within the social, physical and ecological constraints of catchments (clause 5).

Demand for water in Queensland is growing rapidly. As demand continues to rise and pressure increases on limited water resources, there will be an increased need for effective trade in water rights.

Trading in Queensland is still in the early stages of development, but is growing rapidly. From 1998-99 to 1999-2000 temporary trades more than doubled, albeit from a low base.

The permanent market in Queensland is far less developed. Currently, the Mareeba–Dimbulah Irrigation area is the only region where permanent trading can occur. The interstate transfer of permanent rights has also been limited in Queensland. However, the finalisation of the cap on diversions for Queensland and the resolution of the water resource plan for the Condamine–Balonne and Border Rivers catchments will stimulate interstate trade in the future.

The *Water Act 2000* established a more effective framework for water trading. However, the practical roll out of these new arrangements is still in the preliminary stage. Thus, Queensland is looking at interim arrangements to promote trading before the commencement of the new provisions.

Trading within Queensland

Legislative base

Water resource plans form the basis of the revised regulatory framework by defining the amount of water available, providing a framework for water allocations and the amelioration of land and water degradation, and identifying strategies for meeting future water requirements.

Resource operation plans will be used to implement the water resource plans. The Council understands that resource operation plans, like water resource plans, will be based on the demand on water resources within the area. In areas of relatively high demand, such as the Condamine–Balonne, the resource operation plan will establish tradeable volumetric allocations and set rules for both the permanent and temporary trade of water entitlements. These rules may contain limits on the volume of water that may be transferred between locations, whether inside or outside Queensland, or for different purposes (s98(5)). In areas of little demand, such as the Cooper, the resource operation plan may not need to include provision and rules for the transfer of water entitlements.

The Water Act also provides for the future upgrading of both water resource plans and resource operation plans if the situation changes. In this case, if demand for trade expands, it is possible for volumetric allocations to be established and trading rules to be developed.

As noted in the section on allocations, a clear distinction is made between water licences and allocations. Water licences are usually found in areas of limited demand and generally may not be transferred independently from land, because they remain attached to a particular property. (Regulations may, in the future, provide for transfers of licences to other land holdings (s223).) Allocations generally will be found in areas of high demand for resources and trade. They may be owned by anyone and transferred permanently or temporarily. Following the implementation of a resource operation plan, there will be no limitations on the duration of a lease for a water allocation.

In the case of allocations, where a resource operation plan provides rules for transferring allocations, applications to trade are made to the resource operations licence holder where the water is managed under a resource operations licence. Where the water is not managed under a resource operations licence, applications are made to the chief executive of the Department of Natural Resources and Mines.

The Water Act also makes provision for seasonal assignments in which all or part of the water provided by an allocation or licence can be leased to another

party for a water year. Water permits also allow for water extraction and use. However, they are issued for a specific purpose and are not transferable.

Institutions and policies

The Department of Natural Resources and Mines is responsible for the implementation and ongoing management of trading provisions.

SunWater is responsible for the provision of rural water supply and management in Queensland. Each of SunWater's irrigation schemes will provide for trading services for water users where this is allowed for under a resource operation plan.

Box 7 outlines the current interim permanent trading arrangements that apply in the Mareeba—Dimbulah Irrigation Area.

Box 7: Interim trading arrangements established under the Water Regulation 2000.

1. All or part of the water may be transferred to other land within or outside Queensland provided the water is managed under the interim resource operations licence in the Mareeba—Dimbulah Irrigation Area.
2. Water transferred under the regulation must be used for primary production.
3. An application must be made to the chief executive by the buyer and seller and accompanied by a charge of $220.
4. The Chief Executive must publish information about the trade in a local newspaper.
5. The Chief Executive must have regard to sustainability of the proposed transfer, the purpose for which the water is to be used and any other matters the Chief Executive feels appropriate when making a decision to approve the transfer.
6. The Chief Executive may set conditions on the transfer of the right, including that the allocation be adjusted to avoid a negative on sustainability of land and water resources.

Source: Water Regulation 2000

These arrangements will continue until the resource operation plan for the Barron water resource plan is completed.[13] The Barron resource operation plan will replace these interim arrangements with a permanent trading regime, including trading rules. No resource operation plans have yet been developed in Queensland, although draft resource operation plans for the Fitzroy River Basin and Boyne River Basin are currently being prepared (see the section on allocations). In the period until the water resource plans and resource operation plans are in place, Queensland indicated that it will implement interim arrangements for permanent water trading for areas where trading can feasibly occur within the nodes developed for water

[13] The Barron water resource plan is expected to be completed in 2001-02, with the relevant resource operation plan expected to be completed some 12-18 months later.

resource planning purposes. These arrangements will be based on the trading provisions established in the Water Regulation 2000. Queensland noted that the final arrangements will generally be in line with principles outlined in the High Level Steering Group on Water document, 'A National Approach to Water Trading' (2000).

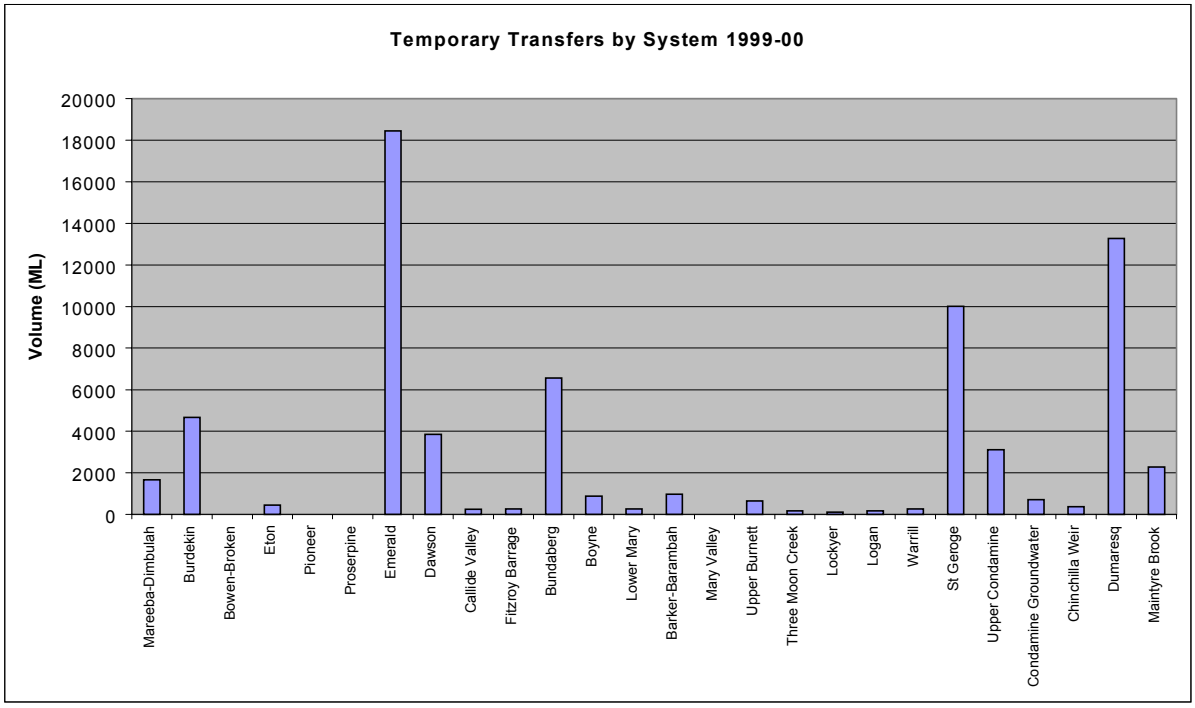
Trading to date

Prior to the passage of the *Water Act 2000*, there was limited scope for water trading to occur in Queensland. Trade under the *Water Resources Act 1989* was effectively limited to temporary trades in regulated systems and a pilot for permanent trades in the Mareeba—Dimbulah Irrigation Area.

Temporary transfers were available for one year, with no restriction on the number of consecutive periods in which water could be traded. In 1998-99, 27 500 megalitres of water were transferred temporarily (HLSGW 2000). This figure climbed to around 69 000 megalitres in 1999-2000, representing 5 per cent of nominal allocation.

Temporary trading occurred in 14 of the 17 water service providers that participated in the 1999-2000 'Australian Irrigation Water Provider – Benchmarking Report' (ANCID 2001). Of these, there is only one, the South Burdekin, where water trading was not possible. The Queensland 2001 NCP annual report provided the following summation of temporary trade for 1999-2000.

Figure 3: Temporary transfers by system 1999-2000



Source: Queensland (2001a)

Demand for permanent trade in the Mareeba—Dimbulah Irrigation Area pilot program has been low, with only four trades in 1999-2000, totalling 164 megalitres. This might reflect the legislative and policy uncertainty of water allocations in the region, especially during the development of the water resource plans and also might reflect the impediments placed on the trade (such as the link between water and land requiring that water be traded only between existing landholders. Land and water management plans are required to be completed as part of the permanent transfer process.

Interstate trade

Legislative base

The Water Act provides clear provision for the transfer of water rights. It does not make any distinction between interstate or intrastate trade. Trading rules will be developed, where necessary, through the establishment of the resource operation plans. These may cover the trade of water entitlements or allocations interstate.

The Water Act, however, does provide provisions for a resource operation plan to limit the volume of water that may be transferred between locations, both within and outside Queensland. Further, information on the details of trading rules, including any restriction on volume of water that may be traded between locations, will only be available as the resource operation plans come on line. Prior to the passage of the *Water Act 2000*, the Water Resources Act had no provision for the trade of water entitlements either into or out of Queensland.

Institutions and policies

The Murray—Darling Basin interstate water trading pilot project does not yet include trade between New South Wales and Queensland. While there is some discussion about introducing a second pilot region in the Border Rivers catchment, Queensland would need to implement the Murray—Darling Basin cap and finalise the water resource plan for the area, being jointly developed with New South Wales, before this could occur.

Interstate trading to date

At the time of writing, the Council was not aware of any interstate trade involving Queensland.

Discussion

Consistent with commitments under the CoAG framework, the objective of water trading is to ensure water is used to maximise its contribution to national income and welfare, subject to the physical, social and ecological constraints of catchments. In making its assessment, the Council recognises that the means by which jurisdictions achieve these reforms will vary. However, to provide a consistent basis for assessment, the Council has evaluated the arrangements in each jurisdiction against a common set of key criteria, which are consistent with recent work by the High Level Steering Group on Water.[14]

Trading in most jurisdictions is still in its infancy, so the assessment has focused on the establishment of mechanisms, policies and information that provide a sound foundation for efficient water trading. The focus in this assessment has therefore been extended to:

[14] These criteria are based on the findings of the report 'A National Approach to Water Trading' (HLSGW 2000). Appendix B provides an outline of the criteria used by the Council.

- the clear definition of sustainable water rights;
- the adequate specification of appropriate trading rules and zones;
- appropriate market procedures; and
- accessible and equitable market information.

In future assessments, the Council will look for evidence of effective trade in areas of demand and for measures to be in place to increase the depth of water trading markets.

Clear definition of sustainable water rights

Queensland's progress on these issues has been discussed in the section on allocations and property rights. Analysis in that section found that property rights were well specified and gave the holder a clear understanding of the value of the right. Without clear specification, the buyer and seller cannot make an accurate judgement of the value of the right. This is essential for efficient trade.

Similarly, the section on allocations and property rights concluded that ownership of the right was clear, and that an adequate registry system is being established. The ownership of the right defines the ability of the owner to realise the benefit of the right. It is generally defined by the quality of title and by the duration, enforcement and transferability and divisibility of the right.

If ownership, based on the above factors, is not clear, the incentive to participate in trade is reduced, as market participants cannot accurately judge the long-term benefit of owning the right.

Water trading zones and rules (where and how people can trade)

Under the Water Act, a resource operation plan must include details of the area[15] and any water infrastructure to which it will apply. A resource operation plan may also include rules for the transfer of water allocations.

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[15] The resource operation plan will not necessarily provide for water trading in all parts of the area covered by the water resource plan. For instance, existing licences in areas of a water resource plan with low levels of water demand and low environmental impacts may not be converted into tradeable water allocations by the resource operation plan. The *Water Act 2000* makes provision for a resource operation plan to be amended if required to allow for progressive implementation of trading in a water resource plan area.

At the time of writing, no resource operation plans had been completed or made publicly available. The Council understands that resource operation plans for the Fitzroy River Basin and Boyne River Basin are being prepared. Queensland advised that interim guidelines for the permanent transfer of water rights will be developed as soon as possible and will be based on the rules for the Mareeba—Dimbulah Irrigation Area. The Queensland Government will consider extending the interim arrangements to areas where trading can feasibly occur within the nodes developed for water resource planning purposes.

Constraints on trade

The Council is not in a position to make a final assessment on whether there are impediments to trade because resource operation plans and the trading rules they are to include are not yet available. However, the Council has considered the trading rules established under the Water Regulation 2000 in the context of their role not only as trading rules for the Mareeba—Dimbulah Irrigation Area, but also as a template for interim trading rules for other areas in Queensland.

On the whole, the regulations provide for the effective, if simple, permanent transfer of water rights. However, the Council notes that trade has been limited to primary production. This is not consistent with the CoAG water framework unless it can be demonstrated that such restrictions are necessary because of the social, physical or ecological constraints of the catchment.

However, given that the Water Act allows for water to be traded to different groups, this appears to be a transitional issue. It is expected that once the relevant resource operation plans come into effect trade will be liberalised.

In relation to the broader trading principles established by the Water Act, the Council is concerned that the Water Act specifically provides that resource operation plans may contain limits on the volume of water that may be transferred between locations, whether inside or outside Queensland, or for different purposes.

A real concern of many irrigation districts and areas is that the permanent trade of water will result in the transfer of water entitlements out of the irrigation district, resulting in:

- a negative impact on local production;
- corresponding regional decline;
- loss of local government rate base; and

- loss of economies of scale, with remaining members required to assume a greater proportion of the fixed costs of infrastructure management.[16]

The Council recognises that these are genuine concerns for many areas, but are usually broader than simply the effect of water trading. In fact, water trading may be a mechanism that allows unviable land to be taken from production, with the associated water used elsewhere. Setting arbitrary limits on the volume of water that may be transferred from a region is not necessarily the most effective way of managing this problem. Other mechanisms, such as the use of appropriate exit fees or capacity shares for irrigation infrastructure, may prove to be more appropriate.

The Council believes that the use of these provisions should be for public reassurance or transitional purposes only and that these limits should not unduly inhibit trade. Provision should also be made for review of these provisions as demand for trade approaches the ceiling level. Restricting trade in this manner is clearly inefficient and inequitable, and would prevent water maximising its contribution to national income. If adopted, the Council will look to see that it is done based on the social, ecological or physical constraints of catchments.

The Council is not yet in a position to assess the efficacy of trading zones and rules in Queensland. As interim and then permanent arrangements are finalised, the Council will examine whether they are consistent with reform requirements.

Markets and trading procedures

A number of checks have been built into the Water Act to protect buyers, sellers and third parties, including the environment.

Checks to protect buyers and sellers

A register of water rights provides security of title for a right, including interests in the water right.

Checks to protect third parties, including the environment

In determining whether to approve a transfer, the Chief Executive of the Department of Natural Resource and Mines must consider, at the applicant's cost, environmental flows objectives, water allocation security, the public interest and effects on water entitlement-holders, resource operations licence-holders and natural ecosystems. If the transfer meets these requirements, the chief executive must approve the application, but may set conditions.

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16 Also known as 'stranded assets'.

A register of water rights to protect third parties who have a financial interest in the right.

The Council is satisfied that procedures are in place to protect market participants and third parties, including the environment. The Council will continue to monitor this issue in future NCP assessments.

Market choices

While the resource operation plan will determine the rules for the transfer of water resources, they will not specify the methods available for water users and market participants to execute this trade. There are three main avenues for trade in Queensland: private trading, brokerage services and a web-based exchange.

Private trade is available where water users can find and negotiate private settlement of a transfer. Trade through a water broker is also possible, although none of the water service providers who participated in the Australian National Committee on Irrigation and Drainage irrigation benchmarking report (ANCID 2001) provided a brokerage service. Further, water trade in Queensland has been primarily temporary trade, involving a much smaller investment than that needed for permanent trade, so the need for a broker or intermediary may be somewhat diminished. A private, web-based water exchange, known as the Water Exchange, also operates in Queensland, although it is unclear exactly how much water is transferred through this exchange, given that it is not yet generally possible to permanently trade water.

As the resource operation plans and water resource plans come into effect, and as permanent trade becomes more widespread, the Council will examine whether markets develop and whether a variety of mechanisms are available to effect trades.

Market information

Information in Queensland is limited in terms of price, quantity and location of trading, and there is little, easily accessible, information on how to effect a trade. The Council is concerned that sufficient information is not available for potential market participants to encourage their full involvement in the market. However, this could reflect the infancy of the new permanent trading arrangements in Queensland and that permanent trading is only occurring in one scheme. With the exception of the brochure describing permanent trade in the Mareeba—Dimbulah Irrigation Area, the Council is not aware of information provided to the community by the Government on the availability and advantages of water trading. There are also few commercial forums where market information is readily available. There are no water brokers who would provide the most accessible source of market information nor does

the online water exchange currently provide information on water traded in Queensland.

The Council has concerns about price disclosure, although these concerns are not limited to Queensland. While there are concerns among States about the disclosure of price in areas where there are few market participants because of the risk of breaching commercial confidentiality, it is important that potential traders have sufficient information to give them confidence in water trading.

Queensland has legislative provision to require entitlement-holders to provide information. However, there are also restrictions on the disclosure of commercially sensitive information. It is not clear whether these provisions have been employed to date. The Water Exchange provides a valuable source of market information, including price, in New South Wales. The expansion of an exchange in Queensland to fill this role would make a substantial difference to the availability of market information.

As markets develop in Queensland, the Council will again look at the issue of the availability of market information to ensure it does not pose an impediment to the efficient operation of the trading market.

Certainty, confidence and timeliness

Water allocations under the Water Act have all the features of a long term lease, with ownership interests clearly registered and ownership enforceable. Allocations are established under the water resource plan process, as described previously, which should provide security from a claw-back or reduction in allocations once environmental provisions are established. As noted in the previous discussion on property rights and the registry system, the arrangements in Queensland are expected to provide certainty and predictability in the right and consequently, provide a sound basis for trade.

It is difficult for the Council to assess timeliness issues within Queensland because there has been little permanent trade. It is within permanent trade that timeliness issues are usually a problem. The Council has been alerted to the fact that permanent trade in the Mareeba—Dimbulah Irrigation Area is cumbersome and takes an average of four months for processing. This lag has had an impact on the effectiveness of the pilot and has led to some sales 'falling through'.

The Council is satisfied that current arrangements are sufficient. This will be an area that the Council will consider in future assessments, particularly in terms of:

- the finalisation of allocation and trading frameworks, including the register of property rights;

- timely processing of applications for trade; and

- the streamlining of administrative processes for clearances,

Capital efficiency

Significant progress has been made in terms of the capital efficiency of water rights in Queensland through:

- the separation of water allocations and land in most areas;

- anyone being able to own water allocations which do not need to be associated with land. This allows a lender to gain ownership of the allocation in case of default;

- development of a register of property rights, established as a subset of the Queensland land titles register. This register will allow third parties, such as lenders, to register their interest in an entitlement; and

- leasing will be possible under the *Water Act 2000*.

The capital efficiency of water rights is not significantly impeded in Queensland. The Council will continue to monitor arrangements for capital efficiency in Queensland as markets develop.

Summary

Water trading in Queensland is likely to increase significantly, particularly in terms of permanent trade, as additional river and groundwater systems approach full allocation. It is important that arrangements are in place to ensure this trade can be conducted as effectively as possible with few impediments. Thus Queensland developed trading provisions as a part of the *Water Act 2000*. The Water Act provides a good basis from which to develop trading markets, including:

- well-specified property rights, including the clear separation of water allocations from land (although some water licences remain attached to land and may not be traded);

- allocations that anyone may own irrespective of the ability to use the water;

- clear reporting requirements; and

- compensation for compulsorily reduced allocations.

However, the Council holds some concerns with a few issues within the framework - in particular, the legislative capacity to set limits on the volume of water that may be transferred out of a region. While this has not yet occurred, there are often better mechanisms available to manage the departure of water from a region with less impact on water rights and trade.

While the legislative provisions for trading are generally good, the establishment of this framework was a requirement of the second tranche NCP assessment. In terms of implementation, which is the requirement of the 2001 NCP assessment, Queensland still has much to do. The Water Act provides for the development of water resource plans and resource operation plans to manage water resources, including through the development of trading rules. However, water resource plans are only available for the Fitzroy, Cooper, Burnett and Boyne systems. No resource operation plans have been finalised so, because they are to set trading rules, trading rules have not been set.

Existing arrangements will continue until these plans are established. However, the existing trading arrangements have significant problems, the primary one being that permanent trade is not yet possible in any region except the Mareeba—Dimbulah Irrigation Area. Queensland indicated that interim trading arrangements will be established in other regions to allow permanent trade until trading rules are developed with the resource operation plans. It is not yet clear where these interim arrangements will be implemented. The limitation of trade to only primary production is another issue with the interim arrangements.

Assessment

Queensland made significant progress towards developing a mechanism for the efficient transfer of water rights. However, significant impediments still exist to trade, particularly permanent trade. The Council will further assess in 2002 the extent of progress with the implementation of:

- first, the interim trading arrangements; and
- second, resource operation plans and the associated trading rules.

Environment and water quality

Jurisdictions must have in place integrated resource management practices, including:

- demonstrated administrative arrangements and decision making processes to ensure an integrated approach to natural resource management and integrated catchment management;
- an integrated catchment approach to water resource management including consultation with local government and the wider community in individual catchments; and
- consideration of landcare practices to protect rivers with high environmental values (clauses 6a and b and 8b and c).

The Minister for Natural Resources and Mines receives strategic advice from the Landcare and Catchment Management Council on landcare, catchment management issues and Natural Heritage Trust projects. That council identifies Statewide priorities and develops policies, strategies and guidelines for the implementation of natural resource management, biodiversity conservation and sustainable production at a State and regional level in accordance with the principles of environmentally sustainable development. The Landcare and Catchment Management Council provides a link between community organisations and Government in natural resource and biodiversity management.

Integrated Resource Management / Catchment bodies

Queensland arrangements

As noted in the Council's second tranche NCP assessment, the Landcare and Catchment Management Council comprises 20 representatives from landcare groups, catchment management groups, industry, State and local government, the Queensland Conservation Council, Greening Australia and the Great Barrier Reef Marine Park Authority. The majority of members are also members of a community-based natural resource management group.

The Landcare and Catchment Management Council coordinates the development of regional resource management strategies to ensure they implement national and State strategies and plans, and other relevant regional and State planning studies. Part of this role involves maintaining communication with Landcare groups and catchment management groups, and supporting landholders and community groups in carrying out landcare and catchment coordination activities.

The Landcare and Catchment Management Council develops guidelines for the endorsement of regional strategy groups. It also has a specific role in overseeing the running of the Natural Heritage Trust administration and providing selection processes for regional and state assessment panels who select trust projects for funding recommendations.

Regional strategies

Queensland's 13 regional strategy groups have made considerable progress in developing natural resource management plans for specific regions and biodiversity management strategies. Since 2000, eight of the regional strategies have received interim or full endorsement from the Queensland Committee of Natural Heritage Ministers and a further four have developed draft regional strategy documents, which are receiving community input. Table 7 summarises the groups' progress in developing regional strategies.

Table 7: Progress in regional and integrated catchment strategies and planning

Regional strategy group	*Status*	*Regional strategy group*	*Status*
Cape York	Endorsed	South West	Interim
Fitzroy	Endorsed	Burdekin	Draft
Mackay–Whitsunday	Endorsed	Lake Eyre	Draft
Murray Darling	Endorsed	Northern Gulf	Draft
South East	Endorsed	Southern Gulf	Draft
Wet Tropics	Endorsed	Burnett–Mary	In progress
Desert Uplands	Interim		

Endorsed means Government approved as official guidance.

Source: Queensland (2001a)

Queensland provided the Council with a strategic guide to natural resource management in south-east Queensland developed by the South East Queensland Regional Strategy Group. The guide applies to 14 catchments and provides an overview of issues and a set of priority actions. Information is drawn from existing catchment plans and strategies, and input was provided from relevant catchment groups. The guide provides a regional overview, a description of links with the Integrated Planning Act, monitoring, evaluation and review requirements, and descriptions of priorities to guide implementation.

The themes of the strategy guide are:

- caring for biodiversity, water, coasts and seas;
- understanding and participation; and
- integrated planning and coordinated management.

For each theme, a regional goal is identified with key strategies proposed to achieve the outcome, as well as examples of priority actions for implementing strategies.

Catchment strategies

Thirty-eight catchment management coordinating committees continue to develop catchment strategies with the more easterly catchment strategies achieving endorsement and moving into the strategy implementation stage. Some 27 committees have received endorsement (interim or full) for their catchment strategies, while another six have commenced preparation of a strategy or completed a draft document. Of the remaining five, two have commenced strategy development, while the remaining three are still to commence. Table 8 outlines the current status of catchment strategy development.

Table 8: Status of catchment strategy development

Catchment	*Status*	*Catchment*	*Status*
Albatross Bay	Endorsed	Mossman–Daintree	Interim
Border Rivers	Endorsed	Noosa	Interim
Burnett	Endorsed	Oxley	Interim
Condamine	Endorsed	Pumicestone	Interim
Dawson	Endorsed	Sarina	Interim
Gilbert	Endorsed	Townsville Coastal Plains	Interim
Herbert	Endorsed	Tully–Murray	Interim
Johnstone	Endorsed	Whitsunday	Interim
Maranoa—Balonne	Endorsed	Baffle Creek	Draft
Maroochy-Mooloolah	Endorsed	Cooper Creek	Draft
Mary	Endorsed	Georgina-Diamantina	Draft
Pioneer	Endorsed	Pine Rivers	Draft
Russell-Mulgrave	Endorsed	Bulloo	In progress
Barron	Interim	Calliope-Boyne	In progress
Bowen-Burdekin Floodplain	Interim	Annan-Endeavour	Due to commence
Bremer	Interim	Bloomfield-Yelangi	Due to commence
Burdekin Rangelands	Interim	Fitzroy	Not scheduled
Lockyer	Interim	Southern Gulf	Not scheduled
Mitchell	Interim	Warrego-Paroo	Not scheduled

Source: Queensland (2001a)

Water use plans

Water use plans are statutory plans prepared under the *Water Act 2000* that provide for the regulation of water use in areas where there is a risk of land and water degradation. A water use plan may state: standards for water use practices; objectives for water use efficiency; water re-use and water quality; and may describe land for which a land and water management plan must be approved for the use of water for irrigation. The types of land and water degradation that a plan would seek to address or prevent include:

- rising water levels;
- increased salinisation;
- deteriorating water quality;
- water logging of soils;
- destabilisation of bed and banks of watercourses;
- damage to the riverine environment; and
- increasing soil erosion.

Queensland advised the Council that the Minister has not considered it necessary to commence the preparation of a water use plan.

The Water Act also provides for the creation of land and water management plans to apply water use and land management practices to single properties where needed. The permission of the landowner is required for these plans to be released. Queensland provided the Council with a copy of the guidelines for preparing these plans.

Discussion

All of Queensland now has a regional natural resource management strategy finalised or in progress. Approximately 80 per cent of the State (by area) is now covered by a catchment strategy. Evidence of the impact and use of regional or catchment strategies lies in the impact on funding that can be sourced to assist with the development and implementation of natural resource management and biodiversity activity. In 2000-01, 85 per cent of Natural Heritage Trust proposals were able to document how the proposal was an integral component of delivering a natural resource management or biodiversity strategy.

In addition to aligning project proposals to the strategic directions outlined in these strategies, Queensland made considerable progress in better coordinating and integrating strategic natural resource management and biodiversity conservation information and actions into other planning mechanisms. The Department of Local Government and Planning and the Department of Natural Resources and Mines have jointly run workshops to progress this integration, with the primary focus on local government planning schemes as the vehicle for advancing better natural resource planning and management outcomes.

Queensland continued work on progressing the conceptual, practical and on-ground aspects of building relationships and outcomes between the regional strategy groups and catchment groups throughout the State. The northern gulf and Mackay-Whitsunday regions, for example, undertook cooperative strategy development at the catchment and regional level, culminating in joint launches and the development of joint projects to deliver mutually beneficial outcomes.

The Council was provided with an extensive list of natural resource management focused projects undertaken in south-east Queensland. These include the *'Maroochy—Mooloolah Catchment Management Strategy'* (Maroochy—Mooloolah Catchment Coordinating Association 2000), which comes under the strategic guide to natural resource management in south-east Queensland. This strategy:

- identified six priority issues: water quality/pollution, riparian management, social harmony, population impact, resource use and planning, and fish habitat;
- identified goals and objectives, key performance indicators and actions (including timeframes) to generate outcomes for each issue;
- identified other relevant natural resource management strategies and the links to those strategies;
- provided a brief description of monitoring and evaluation with a review of the strategy to be conducted by the Maroochy—Mooloolah Catchment Coordinating Association every three to five years; and
- will be applied on the property for which the land and water management plan was prepared.

Assessment

The Council notes the progress Queensland has made since the second tranche NCP assessment. The work of the regional strategy groups is progressing at a satisfactory rate. The information provided to the Council (the strategic guide to natural resource management in south-east Queensland, the Maroochy—Mooloolah catchment management strategy and

the list of natural resource management focused projects that have occurred in south east Queensland) has led the Council to conclude there is evidence of on-the-ground implementation of integrated catchment management in Queensland.

The Council notes that so far Queensland has not considered it necessary to implement the provisions under the Water Act to prepare water use plans. Given the potential for growth in water allocations as a consequence of the water resource plan process, the Council will monitor in forthcoming assessments Queensland's use of water use plans to control any potential adverse impacts arising from new allocations. The Council is satisfied that Queensland has met its reform commitments for this assessment.

National Water Quality Management Strategy

Jurisdictions agreed to support ANZECC and ARMCANZ in developing the National Water Quality Management Strategy, through the adoption of market-based and regulatory measures, water quality monitoring, catchment management policies, town wastewater and sewage disposal, and community consultation and awareness.

Jurisdictions are to demonstrate a high level of political commitment and a jurisdictional response to ongoing implementation of the principles contained in the National Water Quality Management Strategy guidelines, including on-the-ground action to achieving the policy objectives (clauses 8b and d).

Salinity has not emerged as a problem in Queensland although recent studies suggest the potential problem is large and is being fuelled by land clearing. The National Land and Water Audit estimated that some 48 000 hectares in Queensland are already affected by salinity and that one million hectares of Queensland farming land could be seriously threatened in 50 years. The regions considered most at risk of dryland salinity are the Fitzroy, Murray—Darling, Gulf and Burdekin (NLWRA 2000). The audit also showed that water in places such as the Condamine–Balonne and the Warrego rivers might be undrinkable as soon as 50 years from now.

Queensland arrangements

Implementation of the National Water Quality Management Strategy

The policies and principles of the National Water Quality Management Strategy are being implemented through the environmental protection (water) policy of 1997 and subordinate legislation to the *Environmental Protection Act 1994*. The policy discusses the pathway for setting and formalising environmental values and water quality objectives for a specific waterway in accordance with the National Strategy. It also provides for the development and implementation of local government plans for urban

stormwater quality management, sewage management, trade waste management and water conservation.

The draft state coastal management plan and regional coastal management plans being prepared under the *Coastal Protection and Management Act 1995* will recognise, support and seek to assist the implementation of the environmental protection (water) policy in coastal areas and are expected to be completed by mid-2002. The draft state coastal management plan also includes policies dealing with wastewater discharges into coastal waters (sewage and industrial discharges) and waste disposal facilities (including waste from boating and slipway facilities).

In south-east Queensland, the principles contained in the National Water Quality Management Strategy are being implemented through the use of a regional water quality management strategy. The Queensland Government, in cooperation with local government and community and industry groups, is progressively developing and implementing a south-east Queensland regional water quality management strategy. The development of the strategy is based on the principles contained in the National Strategy. Stakeholders will determine environmental values, water quality objectives and management actions. The strategy adopts the scientific framework outlined in the Australian and New Zealand water quality guidelines for fresh and marine waters (ANZECC 1992) and is consistent with overarching State-wide approaches to water quality management.

Queensland provided details on its implementation of the main elements of the National Water Quality Management Strategy as outlined below.

Australian and New Zealand Water Quality Guidelines for Fresh and Marine Waters

The *Environmental Protection (Water) Policy 1997* adopts the national guidelines in deciding the environmental values of water, water quality objectives to protect those environmental values, and protocols to be used in sampling, measurement, analysis and reporting. The Environmental Protection Agency is developing Queensland Water Quality Guidelines based on the scientific framework outlined in the national guidelines. The second draft of the Queensland Water Quality Guidelines was presented to local governments as part of a recent Queensland-wide information program. Publication on a website is expected in the third quarter of 2001. In the absence of site-specific local studies, the Government considers the national Guidelines in setting licence conditions for polluting activities.

Australian drinking water guidelines

The Australian Drinking Water Guidelines 1996 are incorporated into the Department of Natural Resources and Mines' guidelines for planning and design of water supply schemes as the basis of practice in Queensland. The Department of Health is responsible for regulating drinking water quality. Arrangements for the regulation of drinking water are being reviewed as part of the review of the *Health Act 1937*. The review will also consider the outcomes of the National Health and Medical Research Council's framework for the management of drinking water quality.

The Department of Health does not systematically monitor drinking water quality throughout the State. Suppliers can voluntarily submit samples of drinking water for testing by the department.

Guidelines for groundwater protection in Australia

The *Environmental Protection (Water) Policy 1997* requires the development and implementation of environmental plans to protect groundwater. The national guideline and the policy identify vulnerability mapping, aquifer classification systems and wellhead protection as critical issues. The Department of Natural Resources and Mines is the lead agency in the implementation of these plans. The development of plans to protect groundwater requires substantial information. The first stage of this work is expected to be completed by the end of June 2001, with the finalisation of maps that show vulnerability of aquifers to pollution. The development of groundwater protection plans for each aquifer will not be completed for some time.

Guidelines for sewerage systems (effluent management, trade waste)

The document '*Total management planning for urban water-related services'* (DNRM 1994, revised 2000) sets out a National Water Quality Management Strategy compliant management framework for local governments. The Queensland Government also produced guidelines for the planning and design of sewerage schemes, along with a model trade waste environmental management plan as required under the environmental protection (water) policy. The model trade waste policy published in 1993 was upgraded to an environmental management plan in 2000. Compliance with the environmental protection (water) policy is assessed through a requirement for local governments to report annually after they begin implementation of an environmental plan.

Standard sewerage law

An interim code of practice for on-site sewerage facilities sets out performance requirements and criteria for the management of on-site sewerage facilities, with the aim of ensuring that effluent quality, operation and maintenance objectives are met and that environmental values are not compromised.

Strategy for re-using sewage, effluent and urban stormwater

Development of the Queensland water recycling strategy began in July 1997, with the objective of maximising water recycling throughout the State. The strategy is expected to contribute to Government policy, legislative changes, monitoring and funding protocols, best practice guidelines and education programs. The final strategy will provide a framework for further development of water recycling that is safe, environmentally sustainable and cost effective. This initiative will develop the best and most effective ways in which to manage municipal, industrial and agricultural effluents and urban stormwater as a resource rather than as a waste. As part of the strategy, the Queensland Government established a state-of-the-art test facility to research the best methods for treatment of water for various types of re-use.

Urban stormwater management

The Environmental Protection Agency (2001) has produced the document *'Model urban stormwater plans and guidelines'* for use by local governments, in accordance with the environmental protection (water) policy.

National Land and Water Resource Audit

The National Land and Water Resources Audit reported on surface water quality against the standards contained in the 1992 ANZECC Australian water quality guidelines for fresh and marine waters.

Table 9: Exceedance of water quality guidelines for Queensland

	Number of basins assessed	*Major exceedances*	*Significant exceedances*
Nutrient: total nitrogen	11	5	4
Nutrient: total phosphorous	15	4	5
Salinity: electrical conductivity	16	2	4
Turbidity	18	11	4
PH	18	6	3

Total number of basins =69

Source: NLWRA (2000)

The audit found that turbidity and nutrients are the dominant water quality issues within Queensland. Most north-east drainage division basins, particularly larger inland extending basins, recorded high levels of turbidity and nutrient levels.

The audit found that salinity was not a major issue for Queensland at the moment compared with other States, although some basins (such as the Burdekin and the Condamine–Balonne) are recording increasing salinity levels. High levels of acidity or alkalinity were recorded for a number of coastal Queensland basins. Except for two sites in Oxley Creek in the Brisbane Basin, faecal conditions are not routinely monitored in Queensland waterways.

Water quality

The Department of Natural Resources and Mines has released a May 2000 report on preliminary risk assessment of water quality in Queensland river basins (DNRM 2000c) which describes water quality conditions for all basins where sufficient data was available. The main objective of the report was to carry out a preliminary risk assessment on the vulnerability of surface water quality and to provide information on issues likely to respond to management. Water quality condition ratings were described for 51 basins, with most sites described as being good or excellent. However, for 14 basins there was insufficient water quality data for analysis. Basins identified as being most likely to respond to improved management practices are the Condamine, Burnett, lower Mary, upper Mitchell, Dawson and Emerald areas.

WSAA Facts

WSAA Facts 2000 reported on water quality compliance for 1999-2000 for Brisbane City Council, Gold Coast Water, and South East Queensland Water Corporation. The results were as follows:

- Brisbane City Council were 97.7 per cent compliance with bacteriology standards, and 100 per cent compliance with physical-chemical factors (turbidity/colour/pH) as set out in the 1996 Australian drinking water guidelines;

- Gold Coast Water were 100 per cent compliance with bacteriology standards, and an average of 99.6 per cent compliance with physical-chemical factors as set out in the 1987 National Health and Medical Research Council guidelines;

- South East Queensland Water Corporation were 96.8 per cent compliance with bacteriology standards, and 99.3 per cent compliance with physical-chemical factors (turbidity/colour/pH), as set out in the 1987 National Health and Medical Research Council guidelines.

With regard to wastewater treatment and discharge standards set in licences, Brisbane operated with 95.8 per cent compliance and Gold Coast Water operated with 100 per cent compliance (WSAA 2000).

Assessment

For the Council's second tranche NCP assessment, Queensland provided evidence that the principles of the National Water Quality Management Strategy were incorporated in legislation via the environment protection (water) policy of 1997. The Council is satisfied that Queensland is demonstrating a high level of political commitment and is responding to ongoing implementation of the principles contained in the national strategy, including on-the-ground action to achieving the policy objectives.

The Council does note that while Queensland has an extensive number of water quality monitoring sites, the general level of data reliability for determining water quality trends is low. Unless the issue of data adequacy is addressed, Queensland, in developing further water allocations and industries reliant on those allocations, runs a risk of increased deterioration of water quality. While noting the concern with monitoring, the Council is satisfied with the progress made by Queensland in meeting 2001 commitments in relation to the National Water Quality Management Strategy.

Public consultation and education

Jurisdictions must have consulted on the significant CoAG reforms (especially water pricing and cost recovery for urban and rural services, water allocations and trade in water entitlements). Education programs related to the benefits of reform should be developed (clauses 7a and e).

The Queensland Government engaged in extensive community consultation and public education throughout its implementation of the water reform process. Substantial stakeholder involvement has been a key part of determining the rural water price paths and all aspects of natural resource management, including development of water resource plans, and integrated catchment management. Queensland is also in the process of developing customer councils that will be provided with sufficient information to understand the cost drivers in their regions offer input into the consideration of the operation of irrigation districts.

Queensland arrangements

Public consultation

In developing the Water Act 2000, the Department of Natural Resources and Mines released for consultation a number of policy papers and a draft Bill. These included:

- *improving the Water Allocation and Management System in Queensland* (DNRM 1998);
- exposure Draft Bill and Explanatory Material-Water (Allocation and Management) Act (DNRM 1999);
- *governance Requirements for Public Sector Water Service Providers* (DNRM 1999);
- *a Regulatory Framework for the Provision of Water Services in Queensland* (DNRM 1999);
- *Water Supply Planning for Queensland* (DNRM 1999);
- *Water Reform Implications for Local Government* (DNRM 1999); and
- *Institutional Reform of State Water Projects* (DNRM 2000).

Consultation has included regular briefing sessions with the Water Industry Peak Consultative Committee. The committee includes representatives from industry groups, the Local Government Association of Queensland, environmental groups, water boards and central Government agencies. Industry groups represented include canegrowers, the Queensland Irrigators Council, the Queensland Farmers Federation, Cotton Australia, AgForce, the Queensland Conservation Council, Queensland Fruit and Vegetable Growers, the Local Government Association of Queensland, the Environmental Defenders Office, and the Australian Conservation Foundation.

Regional information sessions and briefings for stakeholders have been undertaken throughout the State on all major water reform initiatives, with a particular emphasis on the *Water Act 2000* and local government and water reform.

Rural water pricing

The water reform unit undertook detailed consultation with users over an 18-month period. The Queensland price paths were developed in consultation with the irrigation community at a number of levels:

- the Water Industry Peak Consultation Committee was regularly updated of water industry policy issues and the ongoing development of the price paths;
- a high level policy advisory committee comprising representatives from the main irrigation industries and the Queensland Farmers Federation, provided input into the pricing process; and
- at the scheme level, consultation occurred through interim local management committees (typically comprising up to 15 irrigators from each scheme). In all, 200 irrigators had direct input into the policy process. The water reform unit visited all 27 schemes at least three times over the 18-month period to discuss scheme operating costs, pricing options and related issues.

Water resource plans

The *Water Act 2000* provides a statutory basis to ensure all stakeholders are consulted during the development of water resource plans and resource operation plans for catchment areas. In addition, the *Water Act 2000* requires the formal establishment of a community reference panel to provide community input into the development of water resource plans. The community reference panel must include representatives of cultural, economic and environmental interests in the proposed plan area.

The Minister must also notify the public of an intention to prepare a draft water resource plan, and on completion, make a draft water resource plan available to the wider community. The Department of Natural Resources and Mines makes available on their website the technical information considered in developing a water resource plan.

Discussion

As discussed in the section on allocations, there seems to be no further information available to the community from the draft water resource plan stage to the outcomes implemented in the final water resource plan. Section 51 of the Water Act requires the Minister to make public a report following consultation on a draft water resource plan, detailing issues raised during the consultation process and how the issues were resolved.

The Department of Natural Resources and Mines commissioned a consultant (Gutteridge, Haskins and Davey) to undertake an evaluation of the effectiveness of the department's approaches in engaging the community in the water allocation planning process and to identify possible improvements in those approaches. The report was completed in January 2000 and appears on the departmental website. Key findings of the report included:

- general agreement that the principles of the process are sound but that greater benefits will accrue to the department and the community if further effort is place on defining the structure, developing skills and continuing communication;
- there was a high level of suspicion between stakeholders and the department which could undermine further development of the process;
- the failure of the current process to provide varied levels of information and opportunities for stakeholder involvement;
- the lack of an information strategy;
- the lack of well-defined and agreed roles concerning the participants in the process;
- concern about the provision of technical material in a way that makes it understandable to stakeholders;
- the perception that selection processes for participation in community reference panels were not fair or transparent; and
- concern with the time taken for the process to reach a conclusion, as well as with the changing nature of the process.

The report concluded:

> *The review indicates the need for clearer scoping of [the department's] consultative activities and development of a range of mechanisms which ensure stakeholders at all levels….to be able to participate in the consultative process.*
>
> *To date [the department] has not developed an overall planing framework which clearly locates all of its consultative activities in respect to other work. There seems to have been no point at which the information gathered through consultation with community reference panels is formally included in preparation of final plans.* (DNRM 2000d, p.6)

The Council has raised with Queensland the issue of the lack of transparency between the data released in a draft water resource plan and the outcomes and the final form of a water resource plan as legislation. Queensland tended to rely on ongoing consultation with a range of key stakeholders. In this way, it argued there are no surprises between the contents of a draft water

resource plan and a final water resource plan. For the Condamine–Balonne system, many submissions were made to Government on the draft report and the moratorium. The Government, in response, extended the period for submissions. People were informed that the end of submissions would not mean the end of consultation, because the department and the Minister would meet with people who had made submissions.

The Council notes that Queensland's approach to providing transparency between a draft and final water resource plan relies on speaking to all current and future interested parties, both within and outside a region, and that this could be better addressed by a public document outlining:

- the reasons for the Queensland Government's decision in the final water resource plan; and

- developments from the draft water resource plan stage. Queensland committed to bolster the s51 report to still include a summary of the issues raised during the consultation process and how those issues were dealt with in coming to the final plan. It will also provide a summary of the approved plan and its implications and a discussion of the aspects of the approved plan that are significantly different from the draft plan.

Public education

In addition, the Government prepared brochures on a variety of topics to assist water users to understand the broad issues surrounding water reform. The Queensland 2001 annual report advised the following brochures have been produced to date:

- 'permanent trading in water' (1999) — a guide to trial permanent water trading in the Mareeba—Dimbulah Irrigation Area;

- 'new arrangements for irrigation water pricing' (1999) — an explanation of the need for cost-recovery pricing to ensure the sustainability of irrigation schemes;

- 'Queensland irrigation schemes — price path process' (1999) — an outline of the process established by the Water Reform Unit for determining future price paths for the State's irrigation schemes; and

- 'securing the future for water' (1999) — a broad overview of the water reform process and what it will mean for water users.

Rural water use efficiency

The Department of Natural Resources and Mines developed the rural water use efficiency initiative in consultation with key industry groups, specifically through the rural water use efficiency industry advisory committee. The initiative is a partnership between industry and government to improve the use and management of available irrigation water and, subsequently, to improve the competitiveness, profitability and environmental sustainability of Queensland's rural industries. The initiative aims to promote best-practice irrigation water management through community education, research and direct rural industry organisation involvement. The rural water use efficiency unit undertook a program of raising community awareness regarding water use efficiency, including the development of a web page, the distribution of 'Improving Queensland's rural water use efficiency — the facts' and the use of other promotional materials.

Other educational material

The Queensland Government continues to be a major sponsor of WaterWise. WaterWise aims to create an awareness of the true value of water across all parts of the community and encourages active involvement by all Queenslanders in conserving and managing water resources. A key objective of WaterWise is to implement water conservation and demand management strategies to delay the need for costly new water and wastewater infrastructure.

Adoption programs were established to help farmers achieve best practice in irrigation water management on their properties. Various rural industry organisations manage the programs. A range of fact sheets is available from the Department of Natural Resources and Mines to provide information on techniques for improving on-farm water use. The department also provides other educational material to water users to improve the operation and quality of drainage, farm dams, groundwater, irrigation, pumping, stockwater, land and water management, water quality, and water weeds.

Assessment

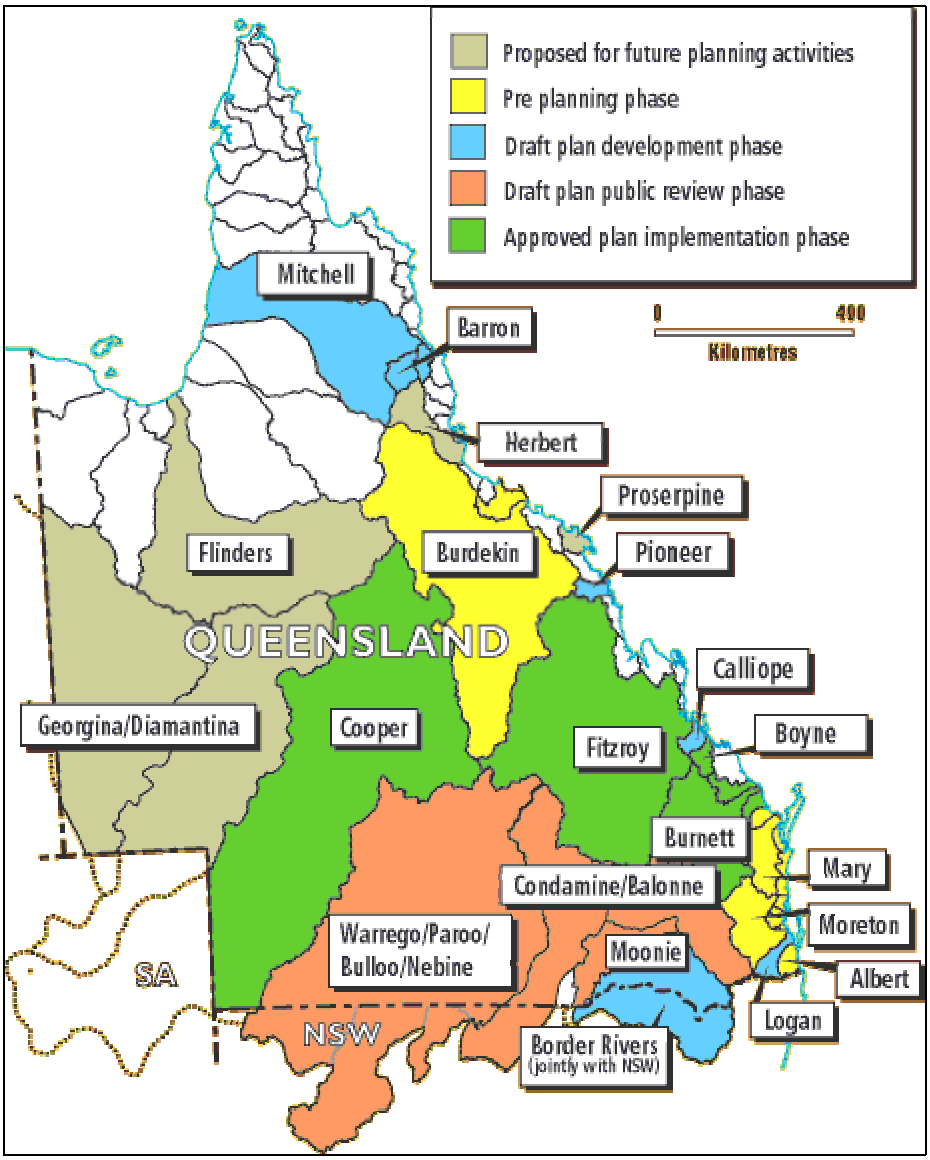
Queensland continues to actively consult with all stakeholders in all aspects of the reforms and has ongoing consultation and education mechanisms. The Council is satisfied for the 2001 NCP assessment that Queensland has met its commitments in this area of reform. In the 2002 assessment, the Council will monitor developments in public consultation on water resource plans.

Attachment 1: Queensland program for improving cost recovery

	Scheme	*Cost recovery deadline*	*Share of total nominal allocation*
Category 1	Emerald Irrigation Area		
	St George River		
	Dumaresq River		
	Cunnamulla		
	Bundaberg River	2001	53%
	Lower Mary River		
	Mareeba River		
	Proserpine		
	Burdekin Irrigation Area		
Category 2	Chinchilla Weir		
	St George Channel		
	Barker Barambah		
	Dawson River		
	Mary Valley	2004	34%
	Upper Burnett		
	Eton		
	Mareeba Channel		
	Bundaberg Channel*		
Category 2B	Logan River	2006	
	Warrill Valley	2006	
	Boyne	2006	
	Upper Condamine	2005	7%
	John Goleby Weir	2005	
	Lower Marry Channel	2005	
	Macintyre Brook	2005	
Category 3	Dawson Channel		
	Central Lockyer & Mortonvale	Ongoing assistance required	6%
	Pie Creek		
	Three Moon Creek		
	Maranoa		
	Lower Lockyer		

Note: Special interim arrangements are to apply to the Bundaberg Irrigation area until announced allocations in the scheme return to 100 per cent of nominal allocation. At this time Bundaberg will take their place in the price path as indicated above. *Source:* Queensland (2001)

Attachment 2: Status and timetable for water resource plan implementation



Source: Queensland 2001a

	1999-2000	*2000-2001*	*2001-2002*	*2002-2003*
Develop draft water resource plan	Burnett Logan Barron Condamine/ Balonne	Border Rivers Bundaberg groundwater Burdekin groundwater Burdekin Mary River Pioneer	Brisbane Pioneer Groundwater	
Release draft water resource plan	Burnett Condamine/ Balonne Moonie River Warrego/Paroo/ Bulloo/Nebine	Barron Logan River Pioneer Basin Border Rivers Calliope River Atherton groundwater (a)	Bundaberg Groundwater Burdekin Groundwater Burdekin Mary River Pioneer Groundwater Albert River Herbert River Mitchell River	Brisbane Flinders River Georgina/ Diamantina Basin
Final water resource plan	Fitzroy Basin Cooper Creek	Burnett basin Condamine–Balonne Boyne Calliope Moonie River Warrego/Paroo/ Bulloo/Nebine	Barron Border Rivers Burdekin Logan Pioneer Albert River Herbert River Mitchell River	Brisbane Bundaberg Groundwater Burdekin Groundwater Mary River Pioneer Groundwater Flinders River Georgina/ Diamantina Basin

(a) Included in Barron water resource plan

Source: Queensland 2001a

Attachment 3: Status and timetable for resource operation plan implementation

	2000-2001	*2001-2002*	*2002-2003*	*2003-2004*	*2004-2005*
Develop resource operation plan	Fitzroy Boyne	Burnett (2001) Condamine–Balonne (2001) Border Rivers (2002) Barron (2002) Pioneer (2002)	Burdekin (2003) Logan (2003)	Mary (2003) Moreton (2004) Proserpine (2004)	
Release Draft resource operation plan		Fitzroy (Sept 2001) Boyne (2001) Burnett (2002)	Barron (2002) Pioneer (2002) Condamine–Balonne (2002) Border Rivers (2002)	Logan (2003) Burdekin (2004)	Mary (2004) Proserpine (2004) Moreton (2005)
Final resource operation plan		Fitzroy (2002) Boyne (2001)	Burnett (2002) Barron (2002) Pioneer (2002) Condamine-Balonne (2002) Border Rivers (2003)	Logan (2004) Burdekin (2004)	Mary (2005) Proserpine (2004)

Source: Queensland 2001a

Appendix A: Third tranche assessment framework

Note: originally released in February 2001

Water reform highlights the multifaceted nature of NCP. The reform package put in place by CoAG in 1994 encompasses urban and rural water and wastewater industries and includes economic, environmental and social objectives. The reform program is aimed at improving the efficiency and effectiveness of water service providers and instituting water management planning such that the effect of all water use (by agriculture, industry, households and the environment) is taken into account.

Significant second tranche reform matters included: urban water pricing; approaches to determining the economic viability and ecological sustainability of new investment proposals; timetables for providing environmental allocations in stressed river systems; and frameworks to allow for appropriate institutional structures and the allocation and trading of water.

The third tranche program extends these commitments. It focuses on the 'on-the-ground' outcomes of the reform process in such areas as rural water pricing and cost recovery, environmental allocations or provisions for the environment, water quality issues, trading arrangements and further institutional reforms.

The Council's second tranche assessment for water reform focused on the establishment of the legislative systems and structures to deliver the CoAG water reforms. A key focus of the third tranche and future assessments will be seeking information from jurisdictions that the reforms, structures and systems are generating real benefits. The 1994 CoAG strategic water reform framework (the CoAG Framework) and related documents subsequently endorsed by CoAG provide the basis for the Council's assessments of water reform progress. The CoAG documents provide generally very broad descriptions of the water reform obligations. Because of this, the third tranche framework developed by the Council provides more detailed explanation and interpretation of the water reform obligations. The framework does not redefine the commitments determined by CoAG, but aims to:

- provide a clear, transparent basis for assessment particularly in relation to matters not considered in previous assessments;
- identify the type of information that jurisdictions should provide to demonstrate compliance; and

- provide a basis for early identification and bilateral discussion of areas where achieving reform outcomes is proving difficult.

The Council's interpretation is based on the experience of earlier assessments, discussions with States and Territories and other stakeholders, and other work by the Council and other relevant organisations.

Jurisdictions have also provided input into the material presented in this chapter. The comments made by governments ranged from the need to be more specific in some areas on how the NCC might assess an item, to the view that the approach in areas is too prescriptive. The Council has sought to accommodate specific comments wherever possible.

Jurisdiction-specific matters arising from the CoAG Strategic Framework

The Council recognises that the reforms may be applied in different ways depending upon the specific circumstances faced by jurisdictions. For example, effective resource management is important for all jurisdictions but the manner in which it is applied may vary according to a range of factors including the level and number of stressed river systems within the jurisdiction. Also, some reforms may not be relevant for some jurisdictions. For example, the ACT does not have a rural water sector and hence these reforms are not required.

In the same way it conducted its second tranche assessments, in the lead up to the third tranche water assessment the Council will hold bilateral discussions on jurisdiction-specific matters and any differences in interpretations relevant to the implementation of the 1994 Strategic Framework. Any remaining concerns can be dealt with through bilateral discussions.

Further NCC Background Papers on Aspects of CoAG Water Reforms

In addition to the guidance on each reform commitment provided in this framework, the Council is separately releasing several additional background papers providing more detailed discussion on a number of issues covered by this framework.

These papers provide background information on the rationale underlying some of the Council's interpretations of the CoAG water reform commitments in a number of *hot spot* areas. However, these papers are provided as background material for reference by jurisdictions and interested parties. They do not form part of this assessment framework.

The Papers have been provided to the Commonwealth and all States and Territories and will be available shortly after the release of the third tranche assessment framework. Copies of the papers will be available from the water section of the Council's website at www.ncc.gov.au.

The papers are listed in Box A.1.

Box A.1: Background information papers on water reform commitments

- **Rural water pricing**. This paper covers full cost recovery in the rural sector including CSOs and positive rates of return.
- **New investment in rural water infrastructure**. This paper discusses a methodology to assess the economic viability and ecological sustainability of new investments in this area.
- **Institutional reform issues in the water industry**. This paper discusses why regulation is important and examines the potential for conflicts of interest between regulation and service provision and arrangements to deal with these.
- **Environmental requirements of the CoAG Water Reforms** (paper prepared with the assistance of Environment Australia). This paper outlines the national agreements on the environment that may be useful as a guide in reporting progress against the environmental requirements of the water framework.
- **Implementing the National Water Quality Management Strategy** (paper prepared by Environment Australia and the Department of Agriculture Fisheries and Forestry Australia in consultation with State and Territory government agencies). The Commonwealth, after consultation with States and Territories, has proposed that implementation of the guidelines should be assessed through a two yearly review process. This paper provides a list of the component modules of the National Water Quality Management Strategy (NWQMS) guidelines and their current status. The Council will be looking to jurisdictions to show how the guideline principles have been adopted in the third tranche and subsequent assessments.
- **Defining water property rights.** This paper will discuss the specification of water property rights so as to promote efficient and sustainable investment and trade.
- **Water reform and legislation review.** This paper will outline the status of legislation reviews of relevant water legislation for each jurisdiction based on a stocktake report conducted by Marsden Jacob consultants.

The 1994 CoAG Strategic Framework

Reform commitment: pricing and cost recovery

In relation to pricing:

3(a) in general –

(i) to the adoption of pricing regimes based on the principles of consumption-based pricing, full-cost recovery and desirably the removal of cross-subsides which are not consistent with efficient and effective service, use and provision. Where cross-subsides continue to exist, they be made transparent,

Queensland, South Australia and Tasmania endorsed these pricing principles but have concerns on the detail of the recommendations;

(ii) that where service deliverers are required to provide water services to classes of customer at less than full cost, the cost of this be fully disclosed and ideally be paid to the service deliverer as a community service obligation (CSO);

3(b) urban water services –

(i) to the adoption by no later than 1998 of charging arrangements for water services comprising an access or connection component together with an additional component or components to reflect usage where this is cost-effective;

(ii) that in order to assist jurisdictions to adopt the aforementioned pricing arrangements, an expert group, on which all jurisdictions are to be represented, report to CoAG at its first meeting in 1995 on asset valuation methods and cost-recovery definitions; and

(iii) that supplying organisations, where they are publicly owned, aiming to earn a real rate of return on the written-down replacement cost of their assets, commensurate with the equity arrangements of their public ownership;

3(c) metropolitan bulk-water suppliers –

(i) to charging on a volumetric basis to recover all costs and earn a positive real rate of return on the written-down replacement cost of their assets;

3(d) rural water supply –

(i) that where charges do not currently fully cover the costs of supplying water to users, agree that charges and costs be progressively reviewed so that no later than 2001 they comply with the principle of full-cost recovery with any subsidies made transparent consistent with 3(a)(ii) above;

(ii) to achieve positive real rates of return on the written-down replacement costs of assets in rural water supply by 2001, wherever practicable;

(iii) that future investment in new schemes or extensions to existing schemes be undertaken only after appraisal indicates it is economically viable and ecologically sustainable;

(iv) where trading in water could occur across State borders, that pricing and asset valuation arrangements be consistent;

(v) where it is not currently the case, to the setting aside of funds for future asset refurbishment and/or upgrading of government-supplied water infrastructure; and

(vi) in the case of the Murray-Darling Basin Commission, to the Murray-Darling Basin Ministerial Council putting in place arrangements so that, out of charges for water, funds for the future maintenance, refurbishment and/or upgrading of the headworks and other structures under the Commission's control be provided;

3(e) groundwater –

(i) that management arrangements relating to groundwater be considered by Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) by early 1995 and advice from such consideration be provided to individual jurisdictions and the report be provided to CoAG;

NCC interpretation and benchmarks for third tranche

Consumption-based pricing (clauses 3(a), 3(b) and 3(c))

Governments have committed to the principle of consumption-based pricing. For urban water providers using surface or groundwater, two-part tariffs (comprising a fixed access component and a volumetric cost component) are to be introduced where cost effective.

Most governments have made progress against commitments for urban water providers to implement two-part tariffs where cost effective. Where the deadline was not achieved at the time of the second tranche assessment, the

Council in its third tranche assessment will look for substantial subsequent progress.

The third tranche assessment will look for assessments of the cost effectiveness of two-part tariffs, to be completed for service providers with greater than 1000 connections. Jurisdictions are asked to provide copies of any reviews which show that implementation is not cost effective, particularly where this involves large service providers.

Where these assessments show two-part tariffs to be cost effective, the Council is looking for jurisdictions to commit to timely implementation. A strong net public benefit justification will need to be provided where implementation is to be phased beyond 2001.

Metropolitan bulk water suppliers should establish internal and external charges that are volumetrically based or are comprised of a two-part tariff with an emphasis on the volumetric component. Metropolitan wastewater charges should reflect the level of services received (volume and pollutant load) where practicable (for example, through effective trade waste charges). Similarly, the Council supports rural water prices including an appropriate volumetric component wherever practicable.

Ideally, all free water allowances should be removed, as these can lead to cross-subsidisation, inhibit incentives for economical water use and undermine the principle of consumption-based pricing. In any instances where low level free water allowances are retained or are to be phased out over time, jurisdictions should provide evidence that a significant proportion of customers and water supplied still face a strong volumetric signal.

Charges based on property values do not necessarily reflect cost of services provided to different customer classes. Where property values are used the Council will look to ensure that they do not undermine the principle of consumption-based pricing.

Full cost recovery – in general (clauses 3(a)(i), 3(b)(iii) and 3(c)(i) 3(d)(i), 3(d)(ii), 3(d)(v) and 3(d)(vi))

Compliance with the CoAG pricing guidelines developed through the Standing Committee on Agriculture and Resource Management (SCARM) Taskforce on CoAG Water Reform and endorsed by ARMCANZ and Senior Officials (see Box A.2) will form the basis of the Council's assessment of progress against CoAG commitments in this area.

Jurisdictions are asked to provide information on the degree to which each aspect of the CoAG guidelines has been met. This should involve, among other things, information on methodologies for assets valuation and provision for asset consumption, as well as information on the treatment of taxes and tax-equivalent regimes (TERs), externalities, dividends and return on capital. Information should be provided on water and wastewater services separately.

Box A.2: Guidelines for the application of Section 3 of the Strategic Framework and Related Recommendations in Section 12 of the Expert Group

1. Prices will be set by the nominated jurisdictional regulators (or equivalent) who, in examining full cost recovery as an input to price determinations, should have regard to the principles set out below.

2. The deprival value methodology should be used for asset valuation unless a specific circumstance justifies another method.

3. An annuity approach should be used to determine the medium to long term cash requirements for asset replacement/refurbishment where it is desired that the service delivery capacity be maintained.

4. To avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities, taxes or TERs [tax equivalent regime], provision for the cost of asset consumption and cost of capital, the latter being calculated using a WACC [weighted average cost of capital].

5. To be viable, a water business should recover, at least, the operational, maintenance and administrative costs, externalities, taxes or TERs (not including income tax), the interest cost on debt, dividends (if any) and make provision for future asset refurbishment/replacement (as noted in (3) above). Dividends should be set at a level that reflects commercial realities and stimulates a competitive market outcome.

6. In applying (4) and (5) above, economic regulators (or equivalent) should determine the level of revenue for a water business based on efficient resource pricing and business costs. Specific circumstances may justify transition arrangements to that level.

7. In determining prices, transparency is required in the treatment of community service obligations, contributed assets, the opening value of assets, externalities including resource management costs, and tax equivalent regimes.

Source: NCC (1998)

Jurisdictions will need to demonstrate that urban and non-metropolitan urban (NMU) water and wastewater providers are recovering costs consistent with the agreed guidelines and CoAG commitments. For vertically integrated providers, processes should be in place to establish the contribution to total cost of major functional areas such as headworks, bulk water, reticulation and retail services.

In regard to rural water pricing[1], consistent with the outcomes of the 14 January 1999 tripartite meeting,[2] the Council will assess jurisdictions as having complied with the pricing requirements where jurisdictions:

[1] The Council has defined this to include all water supply services other than those supplied to urban or non-major customers.

- have achieved full cost recovery;
- have established a price path to achieve full cost recovery beyond 2001 with transitional CSOs made transparent; or
- for schemes where full cost recovery is unlikely to be achieved in the long term, have made the CSO required to support the scheme transparent; and
- have made cross-subsidies transparent.

In applying the outcomes of the tripartite meeting to rural water providers, the Council will look for a substantial proportion of schemes to be recovering at least the lower band of the agreed guidelines. Consistent with CoAG commitments, the Council will look for schemes to, wherever practicable, be earning a positive rate of return on assets.

As with its assessment of urban water providers, the Council will look for rural service providers to establish an annuity for upgrading or refurbishing water supply infrastructure but will also accept other approaches where consistent with the objectives of this aspect of the CoAG Framework.

The Council will look for a sound public benefit justification for those schemes that are unlikely to attain the lower bound even in the long run. The Council will also look for the number and materiality of these schemes to be small.

The CoAG water pricing principles call for regulators to take into account externalities in the setting of prices. The Council would consider a proxy for environmental externalities as the costs to water agencies of mitigating environmental problems. While the approach is not ideal, it is the best the Council can do at this stage of the reform process given the embryonic nature of mechanisms for addressing externalities including problems in trying to identify, quantify and attribute externality costs into individual prices.[3]

Cross-subsidies (clause 3(a)(i))

Clause 3(a)(i) of the CoAG Framework states that cross-subsidies should be transparently reported and ideally removed where they are not consistent

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2 In January 1999, a tripartite meeting was held between representatives from the NCC, the High Level Steering Group on Water Reform (augmented with representatives from ARMCANZ and ANZECC) and the Committee on Regulatory Reform to discuss concerns surrounding the implementation of the CoAG water reform framework. The recommendations arising from the meeting were subsequently endorsed by CoAG.

3 The reality is there will be environmental costs that will not be reflected in pricing. Of course, another way of approaching the problem is for governments to establish some form of property rights over the environment and establish environmental allocations or contingencies.

with efficient service provision and use. In response to the 14 January 1999 tripartite meeting, governments subsequently agreed that:

> *In making its assessment the NCC shall not seek to make its own assessment of the adequacy of the justification of any individual CSOs or cross-subsidies but jurisdictions will provide explanations of the intent of the CSOs and cross-subsidies and the NCC will examine how in totality they do not undermine the overall policy objectives of the strategic framework for the efficient and sustainable reform of the Australian water industry.*

The Council's third tranche assessment will look for governments to demonstrate that they have identified and transparently reported the objectives and size of all cross-subsidies. Furthermore, where a cross-subsidy has efficiency or effectiveness implications that are sufficient to undermine the overall policy objectives of the CoAG Framework, the Council will look for jurisdictions to justify the rationale for the retention of the cross-subsidy. This information should include the objectives of the cross-subsidy and discussion of why these objectives could not be achieved more effectively by another means. The Council will also consider the mechanisms in place to ensure ongoing effective treatment of cross-subsides in the future (for example, guidelines, independent regulation, future reviews).

An economic measure which looks at cross-subsidies outside of a Baumol band (which sets prices between incremental and stand alone cost), is consistent with the CoAG objective of achieving economically efficient water usage and investment outcomes. Thus, CoAG commitments do not preclude differential pricing within the bounds of incremental and standalone cost. However, where prices are below incremental cost, any shortfall in total revenue recovered through prices above standalone cost should be transparently reported. Further, where inconsistent with efficient and effective service provision and use, cross-subsidies should ideally be removed or replaced with a transparent CSO.

Community Service Obligations (clause 3(a)(ii))

Where service deliverers are required to provide water and wastewater services to classes of customers at less than full cost, this must be fully disclosed and, ideally, be paid to the service deliverer as a CSO.

As noted above, as a result of the January 1999 tripartite meeting, governments agreed that the Council would not make its own assessment of the appropriateness of any individual CSOs. However, it was also agreed that the Council would review information on CSOs provided by governments in totality to ensure that these CSOs do not undermine the objectives of the agreed water reform framework.

Thus, the third tranche assessment will look for governments to provide information on the size and objectives of CSOs provided by State and local government water businesses. In considering this information the Council

will look for State and local government CSOs to be provided via an effective framework for identifying, costing, funding, delivering and reporting CSOs. The Council will also look for evidence that the application of this framework is leading to CSOs that are clearly defined, have an explicit public benefit objective, are transparently reported and are consistent with the aims of CoAG pricing reforms.

New rural schemes (clause 3(d)(iii))

This provision commits jurisdictions to conducting robust, independent appraisal processes to determine *economic viability* and *ecological sustainability* prior to investing in new rural schemes, existing schemes and dam construction. Jurisdictions are to assess the impact on the environment of river systems before harvesting water. Legislative provisions, institutional arrangements as well as policies and procedures must be in place to ensure the economic viability and ecological sustainability of new investments in rural schemes prior to development.

In undertaking its third tranche assessment the Council will review developments since the second tranche assessment. This will include:

- revisiting matters raised for further consideration;
- review any changes to arrangements since July 1999; and
- ensuring that the viability and sustainability of any new projects has been established prior to their construction.

In considering the above matters the Council will look for assessment processes to provide for appropriate independence and public consultation and scrutiny. Arrangements should also be flexible enough to match the depth of analysis with the size and significance of the project. For large developments in particular, assessments should be based on the best information available with any assumptions and limitations clearly stated.

For assessments of economic viability the Council will look for all relevant economic, social and environmental costs and benefits to be factored into the analysis.[4] For large developments the Council suggests that a robust cost benefit analysis is an effective way of meeting CoAG commitments.

For assessments of ecological sustainability the Council is interested in information on the nature of the assessment and decision making processes as well as mechanisms to monitor the impacts of the development and compliance with environmental standards.

[4] Viability assessments should also discount cash flows using an appropriate rate such as a project specific weighted average cost of capital.

Reform commitment: institutional reform

In relation to institutional reform:

> 6(c) to the principle that, as far as possible, the roles of water resource management, standard setting and regulatory enforcement and service provision be separated institutionally;
>
> (d) that this occur, where appropriate, as soon as practicable, but certainly no later than 1998;
>
> (e) the need for water services to be delivered as efficiently as possible and that ARMCANZ, in conjunction with the Steering Committee on National Performance Monitoring of Government Trading Enterprises, further develop its comparisons of inter-agency performance, with service providers seeking to achieve international best practice;
>
> (f) that the arrangements in respect of service delivery organisations in metropolitan areas in particular should have a commercial focus, and whether achieved by contracting out, corporatised entities or privatised bodies this be a matter for each jurisdiction to determine in the light of its own circumstances; and
>
> (g) to the principle that constituents be given a greater degree of responsibility in the management of irrigation areas, for example, through operational responsibility being devolved to local bodies, subject to appropriate regulatory frameworks being established;

NCC interpretation and benchmarks for third tranche

Institutional role separation (clause 6(c), 6(d))

As far as possible, the roles of water resource management, standard setting and regulatory enforcement and service provision should be separated institutionally. The Council will look for jurisdictions, at a minimum, to separate service provision from regulation, water resource management and standard setting. Jurisdictions will need to demonstrate adequate separation of roles to minimise conflicts of interest.

The January 1999 tripartite meeting found that, while separate Ministers would be an acceptable form of separation, it is not the only acceptable form to demonstrate adequate separation of service provision from other roles to minimise conflicts of interest. If the regulator and service provider are responsible to the same Minister, the Council would require information about how the resulting potential conflict of interest has been effectively

addressed. The CPA gives implicit support to the desirability of independent regulators in its clause 2 provisions concerning independent prices oversight.

Performance monitoring and best practice (clause 6(e))

Jurisdictions have established national processes for inter-agency comparisons and benchmarking. Benchmarking systems have recently been put in place for the NMU and rural sectors while the Water Services Association of Australia reports annually on progress with major urban providers.

The Council views active participation in these initiatives as demonstrating compliance with this aspect of the reform framework. The Council recognises the first reports for the NMU and rural sectors are likely to be a rough cut in the initial years.

Commercial focus (clause 6(f))

Metropolitan service providers must have a commercial focus, whether achieved by contracting out, corporatisation, privatisation, etc, to maximise the efficiency of service delivery. The Council will look for appropriate structural and administrative responses to the CPA obligations, covering legislation review, competitive neutrality and structural reform.

Irrigation scheme management (clause 6(g))

Jurisdictions endorsed the principle that constituents be given a greater degree of responsibility for the management of irrigation areas citing, as an example, the potential devolution of operational responsibility subject to the establishment of an appropriate regulatory framework.

In conducting the third tranche assessment, the Council will look for all impediments to devolution to have been removed and local management arrangements identified in the second tranche assessment to have been implemented. The Council will also look for decisions to be made in regard to whether devolution of irrigation scheme management takes place and, if so, advice on when this will occur. Where reform has been undertaken, evidence should be provided demonstrating that an appropriate regulatory framework has been put in place.

Reform commitment: allocation and trading

In relation to water allocations or entitlements:

4(a) the State government members of the Council, would implement comprehensive systems of water allocations or entitlements backed by separation of water property rights from land title and clear specification of entitlements in terms of ownership, volume, reliability, transferability and, if appropriate, quality;

(b) where they have not already done so, States, would give priority to formally determining allocations or entitlements to water, including allocations for the environment as a legitimate user of water;

(c) in allocating water to the environment, member governments would have regard to the work undertaken by ARMCANZ and Australian and New Zealand Environment and Conservation Council (ANZECC) in this area;

(d) that the environmental requirements, wherever possible, will be determined on the best scientific information available and have regard to the inter-temporal and inter-spatial water needs required to maintain the health and viability of river systems and groundwater basins. In cases where river systems have been over-allocated, or are deemed to be stressed, arrangements will be instituted and substantial progress made by 1998 to provide a better balance in water resource use including appropriate allocations to the environment in order to enhance/restore the health river systems;

(e) in undertaking this work, jurisdictions would consider establishing environmental contingency allocations which provide for a review of the allocations five years after they have been determined; and

(f) where significant future irrigation activity or dam construction is contemplated, appropriate assessments would be undertaken to, interalia, allow natural resource managers to satisfy themselves that the environmental requirements of the river systems would be adequately met before any harvesting of the water resource occurs;

In relation to trading in water allocation or entitlements:

5(a) that water be used to maximise its contribution to national income and welfare, within the social, physical and ecological constraints of catchments;

(b) where it is not already the case, that trading arrangements in water allocations or entitlements be instituted once the entitlement arrangements have been settled. This should occur no later than 1998;

(c) where cross-border trading is possible, that the trading arrangements be consistent and facilitate cross-border sales where this is socially, physically and ecologically sustainable; and

(d) that individual jurisdictions would develop, where they do not already exist, the necessary institutional arrangements, from a natural resource management perspective, to facilitate trade in water, with the provision that in the Murray-Darling Basin the Murray-Darling Basin Commission be satisfied as to the sustainability of transactions;

NCC interpretation and benchmarks for third tranche

Water allocation (clause 4(a))

Governments have agreed to establish comprehensive systems of water entitlements backed by separation of water property rights from land title and clear specification of entitlements in terms of ownership, volume, reliability, transferability and, if appropriate, quality.

The Tripartite meeting considered 'comprehensive' required:

> *…A 'comprehensive system' of establishing water allocations to be put in place which recognises both consumptive and environmental needs. The system is to be applicable to both surface and ground water. However, applications to individual water sources will be determined on a priority needs basis (as determined by an agreed jurisdiction-specific implementation program.)*

The legislative and institutional framework to enable the determination of water entitlements and trading of those entitlements should be in place. The framework should also provide a better balance in water resource use including appropriate allocations to the environment as a legitimate user of water in order to enhance/restore river health. The Council will also look for appropriate treatment of overland flows.

Water Property Rights

The Council will look for evidence that jurisdictions have in place the necessary legislation, policy, administrative systems and institutional arrangements to implement comprehensive systems of entitlements backed by separation of property rights from land title and clear specification. These arrangements should set:

- the rights and responsibilities of the Crown, users and the environment;
- provide for consultation, community involvement and public education;
- provide a methodology for determining and reviewing a sustainable balance between competing uses (including the environment); and
- deal with intra and interstate consistency where necessary.

The Council is aware there have been some recent concerns by stakeholders concerning what constitutes a water property right for the purposes of the water framework. The Council notes the work done by ARMCANZ in the 1995 paper 'Water Allocations and Entitlements: A National Framework for the Implementation of Property Rights in Water', and by the High Level Steering Group on Water (HLSGW)[5] in the 2000 paper 'National Approaches to Water Trading' which has recently been released for public consultation.

All jurisdictions have passed legislation to define water rights more clearly, separate water entitlements from land title and establish resource management and trading regimes to promote more efficient and sustainable water use. One of the outcomes of separating water rights from land title has been a perception by financial sector participants that these changes will lead to an increase in risk profiles and lending rates. The HLSGW report has concluded that this effect has the potential to undermine the benefits from the broader water reform agenda.

In reviewing the efficacy of arrangements established in legislation the Council will look for a system of property rights that strikes an effective balance between water users' need for security and the environments need for adaptive resource management. Water property rights regimes should maximise efficient water trade and investment subject to environmental needs.

Factors the Council is considering in relation to water property rights regimes include:

- water property rights should be well specified so as to promote efficient trade within the social, physical and ecological constraints of catchments;

- to achieve the above, property rights should be in demand, well specified in the long term sense, exclusive, enforceable and enforced, transferable and divisible and provide for sustainability and community needs;

- in establishing rights that are well specified in the long term sense there is a need to ensure water users get the highest possible level of security in regard to the nature of the property right, and absolute security on the issue of ownership;

- in relation to ownership, while a 'lease in perpetuity' maximises security, it is not required to meet minimum CoAG commitments;

- compensation may be payable, for instance, where reductions in reliabilities and other relevant parameters are capricious or disproportionate but this is not a CoAG requirement and is the purview of governments;

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5 The High Level Steering Group on Water (HLSGW) is responsible for intergovernmental coordination of the water reform agenda.

- Part IV of the Trade Practices Act could potentially be applied if the acquisition of water property rights results in a substantial lessening of competition;

- the Council will be examining the efficacy of water property rights systems for the third tranche assessment;

- water rights should be linked to a robust adaptive resource planning system; and

- any constraints on water rights and trade should be based on a sound public benefit justification and be implemented in a way that minimises impacts on efficient trade.

Provision for the environment (clauses 4(b),4(c), 4(d),4(e), 4(f))

Jurisdictions must develop allocations for the environment in determining allocations of water and should have regard to the relevant work of ARMCANZ and ANZECC. The Council will be looking for progress in implementing jurisdictional programs to be consistent with the ARMCANZ and ANZECC *National Principles for the Provision of Water for Ecosystems* (ARMCANZ/ANZECC 1996).

Best available scientific information should be used and regard had to the inter-temporal and inter-spatial water needs of river systems and groundwater systems.

The CoAG Framework requires that where river systems are over allocated or deemed stressed, there must be substantial progress by 1998 towards the development of arrangements to provide a better balance in usage and allocations for the environment.

The tripartite meeting further clarified the requirements and timeframes:

> *For the second tranche, jurisdictions submitted individual implementation programs, outlining a priority list of river systems and/or groundwater resources, including all river systems which have been over-allocated, or are deemed to be stressed and detailed implementation actions and dates for allocations and trading to the NCC for agreement, and to Senior Officials for endorsement. This list is to be publicly available.*
>
> *For the third tranche, States and Territories will have to demonstrate substantial progress in implementing their agreed and endorsed implementation programs. Progress must include at least allocation to the environment in all river systems which have been over-allocated, or are deemed to be stressed.*

> *By 2005, allocations and trading must be substantially completed for all river systems and groundwater resources identified in the agreed and endorsed individual implementation programs.*

The Council will therefore look to States and Territories to provide information demonstrating that they have:

- considered environmental contingency allocations, including the planning process (allocation, management, operation implementation, and use), monitoring and review mechanisms (the maximum timeframe allowed before review and identification of triggers prior to this time elapsing) after initial determination;

- established a sustainable balance between the environment and other uses, including formal water provisions for surface and groundwater consistent with the ARMCANZ and ANZECC national principles;

- determined and specified property rights, including the review of dormant rights;

- instituted a statewide process in setting environmental allocations, and when issuing new entitlements, have provided for environmental allocations; and

- progressed the implementation of the endorsed allocation programs as published in the Council's second tranche assessment, providing:

  – a report on which river systems (including stressed, and other overallocated systems) identified in the second tranche have fully delivered/ partially delivered/ not yet commenced allocations to the environment, as well as for river systems; and

  – a report on the status of identified stressed rivers which were not addressed in a jurisdiction's endorsed 'roll-out' plan.

The Council agreed to the implementation programs provided by jurisdictions in its second tranche assessment while noting the following relevant matters:

- The National Land and Water Resources Audit, funded under the National Heritage Trust, is currently being undertaken and will provide valuable information to jurisdictions and the Council as to any relevant systems not included in the programs or requiring a higher priority.

- The High Level Taskforce on Water Reform may, prior to the third tranche assessment, undertake to identify some relevant criteria for classifying stressed river systems. This process may result in a modification to implementation programs.

- The implementation programs, by their nature, may need to be amended depending on proposed new developments and other significant events. In particular, the ongoing assessment of unregulated subcatchments may

result in additional High Stressed Catchments being included in the timetable.

The Council therefore concluded that implementation programs may change over time, subject to agreement between the Council and a jurisdiction.

For the third tranche assessment, the Council is seeking information on progress against implementation programs which demonstrates the following outcomes.

1. Regard to the work of ARMCANZ and ANZECC

In their approaches to water planning, allocations and use, jurisdictions will have had regard to the twelve principles embodied in work of the ARMCANZ and ANZECC *National Principles for the Provision of Water for Ecosystems* (ARMCANZ and ANZECC 1996). These are provided in Box A.3.

Box A.3: ARMCANZ National Principles for the Provision of Water for Ecosystems

Principle 1 - river regulation and/or consumptive use should be recognised as potentially impacting on ecological values.

Principle 2 - provision of water for ecosystems should be on the basis of the best scientific information available on the water regimes necessary to sustain the ecological values of water dependent ecosystems.

Principle 3 - environmental water provisions should be legally recognised.

Principle 4 - in systems where there are existing users, provision of water for ecosystems should go as far as possible to meet the water regime necessary to sustain the ecological values of aquatic ecosystems whilst recognising the existing rights of other water users.

Principle 5 - where environmental water requirements cannot be met due to existing uses, action (including reallocation) should be taken to meet environmental needs.

Principle 6 - further allocation of water for any use should only be on the basis that natural ecological processes and biodiversity are sustained (that is, ecological values are sustained).

Principle 7 - accountabilities in all aspects of management of environmental water should be transparent and clearly defined

Principle 8 - environmental water provisions should be responsive to monitoring and improvements in understanding of environmental water requirements.

Principle 9 - all water uses should be managed in a manner which recognises ecological values.

Principle 10 - appropriate demand management and water pricing strategies should be used to assist in sustaining ecological values of water resources.

Principle 11 - strategic and applied research to improve understanding of environmental water requirements is essential.

Principle 12 - all relevant environmental, social and economic stakeholders will be involved in water allocation planning and decision-making on environmental water provisions.

Source: (ARMCANZ and ANZECC 1996)

2. Stressed or over-allocated rivers or aquifers

Jurisdictions will need to show that they have achieved substantial progress in meeting the commitments with regard to stressed or over-allocated systems within the timelines provided in the implementation programs as published in the second tranche assessment.

The Tripartite meeting identified that '*significant progress*' is required for the third tranche assessment and was defined to include at least allocations to the environment in all river systems which have been over-allocated, or are deemed to be stressed. Jurisdictional programs in this area must be substantially complete by 2005.

The issue of environmental allocations in stressed or over-allocated systems will be carefully scrutinised by the Council in the third tranche assessment. Jurisdictions will need to demonstrate progress in setting allocations that are adequate to meet the environmental requirements of water sources and dependent ecosystems. Jurisdictions will also need to demonstrate that there are adequate monitoring and review arrangements in place, such that allocations are able to be revised should monitoring reveal current allocation arrangements are inadequate.

The Council accepts that some jurisdictions have only recently enacted legislation which provides for full recognition of the environment's right to a share of the water resource necessary to maintain ecological values. For third tranche compliance, the Council will expect that planning and implementation mechanisms are substantially in place such that allocations to the environment can be implemented as per a jurisdiction's timetable.

In the second tranche assessment, the Council noted that implementation programs may change over time, provided there is agreement between a jurisdiction and the Council.

3. Systems not defined as stressed or over-allocated

Jurisdictions will need to demonstrate both the capacity and intention to formally provide and use scientifically based environmental allocations for all water dependent ecosystems (as defined in the ARMCANZ and ANZECC principles), thus recognising the environment as a legitimate user of water.

The Council considers that, for all rivers and aquifers not presently declared over-allocated or hydrologically stressed, there should be no impediment to developing a formal allocation for the environment if required. The Council will therefore look for evidence in future assessments that jurisdictions have forward looking mechanisms in place and operating effectively for adaptive natural resource management.

In short, the Council seeks evidence of progress for the third tranche and subsequent assessments to ensure that allocations and trading will be substantially completed for all river systems and groundwater resources by 2005 as identified in the agreed and endorse individual implementation programs.

4. Review of allocations

While jurisdictions may have used the best available scientific information to determine initial allocation decisions, they will also need to demonstrate that they have not locked in allocations which over time and in the light of better information, could be seen as being inadequate to meet environmental water requirements.

The Council expects jurisdictions to have in place a clear pathway for review of allocations within the timeframe called for in the CoAG Framework.

Water trading (clause 5)

The objective of water trading is to ensure water is used to maximise its contribution to national income and welfare, subject to the physical, social and ecological constraints of catchments. The CoAG Framework originally looked for trading arrangements in water entitlements to be instituted once the entitlement arrangements have been settled and that this should occur no later than 1998.

Jurisdictions should establish a framework of trading rules, including developing necessary institutional arrangements from a natural resource management perspective to eliminate conflicts of interest, and remove impediments to trade. The Council will consider the adequacy of trading rules to ensure that the scope for efficient trade is maximised. Where restrictions on trade exist, information should be provided on the physical, social or ecological reasons for the restrictions.

The Council will be looking for impediments to trade to be addressed and the further development of interstate trade in water. For the third tranche assessment, the Council is looking for States and Territories to:

- provide information on developments since the second tranche assessment including current trading rules, the legislative and institutional arrangements, as well as the value, volume, location and nature (for example, permanent versus temporary trades, transfers from lower to higher value uses) of inter and intrastate trades;

- Where cross-border trade is possible, trading arrangements must be consistent between jurisdictions and facilitate trade. Where trading across State borders can occur, relevant jurisdictions must review pricing and asset valuation policies to determine whether there is any substantial distortion to interstate trade. Jurisdictions should develop proposals for further extending interstate trading in water, given the framework requirement for cross border trade to be as widespread as possible (for example, the second tranche assessment calls for interstate trade between: New South Wales and Queensland as a priority; the ACT and New South Wales; and Western Australia and the Northern Territory for the Ord system); and

- demonstrate that, where restrictions remain, the benefits of the restriction outweighs the costs (for example, show that mechanisms in place for water trading do not adversely impact on river health where surface waters are traded, or in the case of groundwater, do not result in demands on aquifers that are ecologically unsustainable).

Reform commitment: environment and water quality

In relation to institutional reform:

> 6(a) that where they have not already done so, governments would develop administrative arrangements and decision-making processes to ensure an integrated approach to natural resource management;
>
> (b) to the adoption, where this is not already practiced, of an integrated catchment management approach to water resource management and set in place arrangements to consult with the representatives of local government and the wider community in individual catchments;

In relation to the environment:

> 8(a) that ARMCANZ, ANZECC and the Ministerial Council for Planning, Housing and Local government examine the management and ramifications of making greater use of wastewater in urban areas and strategies for handling stormwater, including its use, and report to the first Council of Australian Governments' meeting in 1995 on progress;
>
> (b) to support ARMCANZ and ANZECC in their development of the National Water Quality Management Strategy, through the adoption of a package of market-based and regulatory measures, including the establishment of appropriate water quality monitoring and catchment management policies and community consultation and awareness;
>
> (c) to support consideration being given to establishment of landcare practices that protect areas of river which have a high environmental value or are sensitive for other reasons; and
>
> (d) to request ARMCANZ and ANZECC, in their development of the National Water Quality Management Strategy, to undertake an early review of current approaches to town wastewater and sewage disposal to sensitive environments, noting that action is underway to reduce accessions to water courses from key centres on the Darling River system. (It was noted that the National Water Quality Management Strategy is yet to be finalised and endorsed by governments.);

NCC interpretation and benchmarks for third tranche

Integrated resource management (clause 6(a), 6(b) 8(b), and 8(c))

Jurisdictions should have in place integrated resource management practices, including:

- demonstrated administrative arrangements and decision making processes to ensure an integrated approach to natural resource management and integrated catchment management;
- an integrated catchment management approach to water resource management including consultation with local government and the wider community in individual catchments; and
- consideration of landcare practices to protect rivers with high environmental values.

The Council will examine the programs established by jurisdictions to improve approaches for integrated resource management. Programs should desirably address such areas as government agency coordination, community involvement, coordinated natural resource planning, legislation framework, information and monitoring systems, linkages to urban and development planning, support to natural resource management programs and landcare practices contributing to protection of rivers of high environmental value.

Integrated catchment management

It is important that jurisdictions demonstrate that the catchment management planning process is free from domination by narrow sectoral interests to ensure decisions reflect the balance of interests within the wider community. Genuine stakeholder participation in catchment planning requires agreement to the principles underpinning the plan such as cost sharing arrangements, acceptable basin impacts, and allowable tradeoffs amongst water users. Appropriate institutional arrangements should ideally have a statutory underpinning.

The Council is aware that there has been little guidance developed to date to address issues of integrated catchment management. The Council notes the House of Representatives Standing Committee on Environment and Heritage is conducting an inquiry into catchment management practices in Queensland, New South Wales, South Australia, Western Australia, ACT and Victoria, and is expected to report its findings shortly.

The Council proposes to review the process followed by each jurisdiction to ensure effective implementation of catchment management practices. Further, the Council will also take account of any reviews by jurisdictions in this area and whether the findings of these reviews are being implemented.

Information provided by jurisdictions could include:

- a description of the overall coordinating body including its composition and functions relating to natural resource management and links to regional/local government bodies;

- a description of the process whereby catchment management bodies (trusts, committees, councils, or groups) are formed including how the local community, local government, and state agencies are involved;

- a description of the statutory basis of catchment management plans/strategies and capacity and mechanisms to enforce actions identified in the plan;

- a description of the framework used to assist catchment managers to evaluate/review the effectiveness of a catchment management process; and

- a description of landcare practices (including extent of coverage) that protect areas of river which have a high environmental value.

National Water Quality Management Strategy (clauses 8(b) and 8(d))

The National Water Quality Management Strategy (NWQMS) aims to deliver a nationally consistent approach to water quality management. It is being developed in response to growing community concern about the condition of the nation's water. The policy objective is '*to achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development*.'

The Council is proposing to take the following approach for the third tranche assessment.

- Each jurisdiction should be able to demonstrate a high level of political commitment and a jurisdictional response to ongoing implementation of the principles contained in the NWQMS guidelines, including to achieving the policy objectives. Such commitment should include the development of practical on-the-ground action, which might involve the use of legislation, policy instruments, programs or plans. These should contain provisions which are consistent with the guidelines, and scope for review.

- Each jurisdiction should have a publicly stated commitment to implementing the principles identified in the Strategy and have implemented an approach for adopting the scientific framework outlined in the *Australian Water Quality Guidelines for Fresh and Marine Waters* (ANZECC 1992). There should be an appropriate statewide approach to water quality management.

- Each jurisdiction should have in place a water reform program that integrates water quality and quantity management requirements in their

approaches to land-use planning. In relation to water quality, this program should target the attainment of the ambient environmental quality objectives set in consultation with the community.

- All relevant legislative, regulatory and policy measures to protect water quality should, where practicable, be consistent with the *Implementation Guidelines for the NWQMS* (ARMCANZ and ANZECC 1998). In particular, they should include measures to promote:

  – integrated resource management;

  – identification of environmental values and associated water quality objectives; and

  – catchment, coastal and groundwater management planning.

Each jurisdiction should be able to demonstrate use of the relevant national guidelines. Where necessary, jurisdictions should have produced local guidelines or codes of practice consistent with the national guidelines so far completed for those industries covered under the NWQMS. The national guidelines seek adoption of local guidelines to underpin the regulation of each of the activities covered.

The strategy for the achievement of sustainable water quality management should build on a full mix of approaches including, but not limited to, regulatory and market based approaches, education and guidance. This is supported by CoAG. Market-based approaches should play a complementary role in achieving protection and enhancement of water quality where appropriate.

Where modules have been finalised, jurisdictions must have finalised their approach and initiated market-based and regulatory activities and measures such as water quality monitoring, catchment management policies, town wastewater and sewerage disposal and community consultation and awareness to give effect to the NWQMS.

Jurisdictions should support ANZECC and ARMCANZ in the development of the remaining modules of the NWQMS.

Reform commitment: public consultation and education

In relation to consultation and public education:

> 7(a) to the principle of public consultation by government agencies and service deliverers where change and/or new initiatives are contemplated involving water resources;

(b) that where public consultation processes are not already in train in relation to recommendations (3)(b), (3)(d), (4) and (5) in particular, such processes will be embarked upon;

(c) that jurisdictions individually and jointly develop public education programs in relation to water use and the need for, and benefits from, reform;

(d) that responsible water agencies work with education authorities to develop a more extensive range of resource materials on water resources for use in schools; and

(e) that water agencies should develop individually and jointly public education programs illustrating the cause and effect relationship between infrastructure performance, standards of service and related costs, with a view to promoting levels of service that represent the best value for money to the community;

NCC interpretation and benchmarks for third tranche

Consultation prior to change (clauses 7(a) and 7(b))

Jurisdictions must have consulted on the significant CoAG reforms (especially water pricing and cost recovery for urban and rural services, water allocations and trade in water entitlements). The Council will examine the extent and the methods of public consultation, with particular regard to pricing, allocations and water trading.

Public education programs (clauses 7(c), 7(d) and 7(e))

Education programs related to the need for and benefits of reform should be developed. Evidence should also be provided of agencies working individually and jointly to develop public education programs that illustrate the need for reform, and general awareness of water related issues. This could include the relationship between infrastructure performance, standards of service and related costs. These programs should promote levels of service that represent the best value for money to the community.

The Council will look for evidence that responsible agencies are working with education authorities to develop a more extensive range of resource materials for use in schools.

The Council noted in the second tranche assessment that there is a potential conflict in the service provider being responsible for determining the level of ongoing public education on water conservation when it has a financial

interest in increased water consumption. The Council is interested in information on measures used by jurisdictions (for example, an effective purchaser provider split) to address this issue, including programs offered by service providers as 'good corporate citizens'.

Reviewing and reforming water legislation: the CPA commitment

As well as implementing the CoAG Framework, governments agreed to ensure the water industry is subject to clause 5 of the CPA. This commits governments to ensuring that legislation does not restrict competition unless the benefits of the restriction to the community as a whole outweigh the costs and the objectives of the legislation can only be achieved by restricting competition.

Legislative reform was important for meeting a number of second tranche water reform commitments in relation to, for example, water allocations and trading, institutional separation and resource management. Until recently a key third tranche issue was the risk that jurisdictions may not have implemented amendments to legislation by the year 2000 deadline, in line with the CPA legislation review commitments.

However, in November 2000 CoAG agreed that the 2000 deadline for the full completion of all jurisdictions' legislation review programs should be extended to 30 June 2002. Accordingly, the Council will continue to monitor progress and look for full implementation by 30 June 2002, with a robust public interest justification provided for any delays beyond this date.

For the third tranche, the Council is looking for jurisdictions to provide a status report on reviews of water legislation including whether a piece of legislation has been repealed by passage of new legislation. Where a government chooses to continue a restriction on competition, or not to apply recommended reforms, the Council will require evidence in the annual report of the public interest justification or why non-implementation benefits the community.

Appendix B: Water trading

Governments have agreed that water trading arrangements should be in place to so as to maximise water's contribution to national income and welfare, within the social, physical and ecological constraints of catchments.

Consistent with commitments under Clause 5 of the CoAG framework, the objective of water trading is to ensure water is used to maximise its contribution to national income and welfare, subject to the physical, social and ecological constraints of catchments. The Council's view is that, as far as possible, water rights regimes should facilitate trading that maximises the value of the resource with any restriction on trade being transparent and based on a sound public benefit.

In assessing compliance with Clause 5 of CoAG framework, the Council has looked for the following matters to be given due consideration:

- a clear definition of sustainable water rights; (ie what is being traded)
- clear water trading zones and rules; (ie where and how trade can occur)
- robust markets and trading procedures; (clearance and facilitating trade)
- a number of market choices;
- accessible and equitable market information;
- certainty, confidence and timeliness; and
- capital efficiency.

This approach is consistent with the High Level Steering Group on Water report 'A National Approach to Water Trading' (2000).

In making its assessment the Council recognises that the means through which each of the above issues are addressed will vary from jurisdiction to jurisdiction. That said, as trading in most jurisdictions is still in its infancy, the assessment has focussed on the establishment of mechanisms, policies and information that provide a sound foundation for efficient water trading. Particular focus in this assessment has therefore been extended to:

- the clear definition of property rights;
- adequate specification of appropriate trading rules and zones;
- appropriate market procedures; and

- accessible and equitable market information.

In future assessments, the Council will look for evidence of effective trade in areas of demand and measures to be in place to increase the depth of water trading markets.

Definition of water entitlements

Well-defined property rights are essential for efficient water trade. Efficient trade in water rights requires that market participants are able to form a reasonable expectation about the magnitude and distribution of the benefits likely to be provided by the water right and the likelihood that those benefits will be realised. That is, water rights must be well defined in terms of both:

- *the nature of the right* – the benefits promised by holding the water right; and

- *ownership* – the right holders ability to realise those benefits.

In addition, transitional mechanisms that allow for the movement to a system of sustainable property rights should be open and transparent so that potential market participants understand the impact upon their water rights.

Discussion on the definition of water entitlements has been given in the allocations section. Therefore, the focus in this chapter will be solely upon the impact of these issues on the efficacy of inter- and intra- state trading markets.

Nature of the right

Efficient water trade, consistent with the clause 5 objective of maximising water's contribution to national income, requires that buyers and sellers have a clear understanding of exactly what they are trading. This includes clear specification of the volume, ownership, reliability and, if appropriate, quality of the water provided by the right over time. Poorly defined rights increase the risks associated with holding a water right, which is likely to discourage beneficial trade and investment that would have otherwise occurred.

Ownership

Uncertainty about the individual right holder's security of tenure can impede efficient trade and investment. Rights covering only a short time or which have significant risk of uncompensated reductions in the share of the available resource provided for the duration of the water right mean that water users are more uncertain about whether they will have access to the water in the future. This can be a significant issue, particularly when considering major investments in assets with long lives with little or no resale value. Key issues in ensuring that water rights' security of ownership of

water rights is maximised include the duration of the right, ensuring that the right is enforced, the quality of the title and establishing rights that are transferable and divisible.

Water trading zones and rules (where and how people can trade)

Efficient and effective trading requires clearly defined trading zones and rules. Uncertainty about where and under what conditions trading can take place can discourage mutually beneficial trades. Where trading rules and zones are used to pursue environmental or community objectives, this should be done in a way that minimises the impact on efficient trade.

Markets and trading procedures

As noted by the High Level Steering Group on Water's Report, any financial transaction involves risk to the participants (including payment to the seller and delivery to the buyer). However, water trade involves an important set of additional risks relating to environmental impacts and third party effects. If water trading is to maximise water's contribution to national income and welfare, transparent and efficient clearance procedures must be in place to address risks to both market participants and third parties.

Where precautionary measures are put in place, it is important to:

- separate legitimate from illegitimate reasons for restricting trade;
- recognise that social impacts should not be ignored but should be addressed in their own right;
- examine and improve the efficacy and efficiency of legitimate restrictions; and
- balance the need for appropriate protection for buyers, sellers and third parties, generally through buyer and seller checks, with the need for timely processing of trade applications.

Ideally, sufficient information should be provided to allow potential buyers and sellers to shop around and compare water prices, transaction fees and services offered by water brokers and water exchanges.

Market choices

The HLSGW Report notes that it is important for potential market participants to have a wide choice in the manner in which their trade is conducted. There are three main mechanisms for trade:

- Private trade;
- Water brokers; and
- Water exchanges.

While it is not essential to have all of these options available for all trades, a variety of mechanisms for trade will only benefit trading markets. A variety of trading mechanisms usually results in the wider public availability of information regarding trading mechanisms, availability and price and encourages participation in the market as buyers and sellers can make a reasonable estimate of the value of their water. As well as providing a mechanism for trade, a water exchange is one way in which market information can be provided effectively. Evidence suggests that these exchanges also facilitate trade by providing a price-setting function for private sales in the region

Market information

Water trading will only maximise the resources contribution to income and welfare when actual and potential market participants have enough and equal information to make and informed decision about a particular trade. As noted by the HLSGW Report an effective market depends on buyers and sellers having access to timely and relevant quality information on the key questions of:

- what is being traded;
- where can water be traded to and from;
- how trades can be executed;
- what are the procedures; and
- what are the risks and can these be managed.

The Report also notes the value of water exchanges as a forum for the dissemination of market information and price information. Evidence suggests that exchanges also serve a price setting function for private sales.

Certainty, confidence and timeliness

It is important for potential market participants to fully understand the risks involved with participation in the market and that these risks be minimised. As such, the High Level Steering Group on Water report notes that:

> *Governments should ensure that trading is as open and transparent as possible and should seek to minimise any artificial impediments to trade.*

Market transparency could be accomplished through easily available market information and information on trading rules, practices and procedures. This would include clear specification of water property rights, especially in terms of the nature of the right and ownership. Governments should work to remove any impediments to effective trade, and ensure that remaining impediments are based on sound public benefit and be the least distortionary means possible.

Capital efficiency

Improved capital efficiency of water entitlements and property rights is a key outcome of the better specification of property rights and the development of trading markets. Water entitlements are valuable capital assets, and in many areas, are more valuable than the land they used on. A water user with a water entitlement of 5000ML could potentially own a resource with a value in excess of $5million.

As such, water users need flexibility in the methods of managing water as a capital asset. These methods may include:

- Mortgage security;
- Leased for one or many years in the same manner as vehicles and equipment, rather than purchased outright;
- Sold to a financier and leased back; and
- Subject to conditional sale, purchase or lease contracts and other forms of options.

It should be noted that mechanisms to improve capital efficiency as described, particularly the latter two, are generally found only in developed, or mature, markets. As water markets are generally still in their infancy, the Council will not be requiring a specific suite of these mechanisms in its third tranche assessment. Instead, the Council has looked for the appropriate basis to exist for the development of these options, and consideration by Governments of how markets may be improved in future assessments.

Appendix C: List of submissions

Australian Conservation Foundation

Burdekin River Irrigation Area Committee

The Greens

Mareeba-Dimbulah Irrigation Area – Interim Local Management Committee

St.George Irrigation Area

Queensland Conservation Council

Queensland Farmers Federation

World Wide Fund for Nature

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