2 New South Wales

The elements of the Council of Australian Governments (CoAG) water reform program that are relevant for New South Wales in this 2003 National Competition Policy (NCP) assessment are: water and wastewater pricing; the establishment of the State's water access licence and registry system; the provision of water to the environment for stressed and overallocated river systems; intrastate water trading arrangements; the remaining institutional reform requirements (arrangements for the separation of State Water and the Department of Infrastructure, Planning and Natural Resources on regulatory decision making and integrated catchment management); the implementation of the National Water Quality Management Strategy (NWQMS); and the completion of the review and reform of water industry legislation that restricts competition. The National Competition Council assessed New South Wales's compliance with the CoAG obligations in these areas in this 2003 NCP assessment. As required by CoAG, the Council also considered public education and consultation activity in the reform areas assessed. In addition, the Council reported on progress by New South Wales towards meeting water reform obligations on rural water pricing and implementing water entitlements, which will be assessed in the 2004 NCP assessment.

2.1 Water and wastewater pricing

Full cost recovery

Governments are 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 the nominated jurisdictional regulator (or its equivalent) as follows.

- To be viable, a water business should recover at least the operational, maintenance and administrative costs, externalities, taxes or tax equivalents (not including income tax), the interest cost on debt, dividends (if any) and make provision for future asset refurbishment/replacement. Dividends should be set at a level that reflects commercial realities and simulates a competitive market outcome.

- To avoid monopoly rents, a water business should not recover more than the operational, maintenance and administrative costs, externalities (defined for the purpose of the pricing obligation to be natural resource management costs attributable and incurred by the water business), taxes or tax equivalent regimes, provision for the cost of asset consumption and cost of capital, the latter being calculated using a weighted average cost of capital.

- In determining prices, the regulator 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. Cross-subsidies that are not consistent with efficient and effective service, use and provision should ideally be removed.

- Where service deliverers are required to provide water services to classes of customers at less than full cost, the cost of this should be fully disclosed and ideally paid to the service deliverer as a community service obligation.

- Asset values should be based on deprival value 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.

- Transparency is required in the treatment of community service obligations, contributed assets, the opening value of assets, externalities including resource management costs, tax equivalent regimes and any remaining cross-subsidies.

Reference: CoAG water reform agreement, clauses 3(a)–(d); and guidelines for the application of section 3 of the CoAG strategic framework and related recommendations in section 12 of the expert group report (CoAG pricing principles)

Four businesses provide metropolitan water and wastewater services in New South Wales: the Sydney Water Corporation, the Hunter Water Corporation, and the water and wastewater businesses of the Gosford City Council and the Wyong Shire Council. The Independent Pricing and Regulatory Tribunal (IPART) regulates the prices of their services. Prices are set at a level that recovers operational, maintenance and administration costs, provides for future asset refurbishment and replacement, provides a dividend to the government owner and earns a rate of return on the value of assets. The IPART price determinations also incorporate taxes or tax equivalents, except for the businesses of the Gosford City Council and the Wyong Shire Council.

In previous NCP assessments the Council found that the New South Wales approach met CoAG water and wastewater pricing requirements, although it noted that the water and wastewater businesses operated by Gosford and Wyong paid neither taxes nor tax equivalents. For this 2003 NCP assessment, therefore, the Council focused on the extent to which the larger providers of nonmetropolitan urban water and wastewater services (those providers with more than 1000 property connections) are fully recovering costs. The Council also reported on the progress of rural water authorities towards full cost recovery against the 2004 assessment timetable set by CoAG.

Nonmetropolitan urban water and wastewater services

Assessment issue: New South Wales is to demonstrate that all larger providers of nonmetropolitan urban water and wastewater services (those providers with more than 1000 connections) are achieving full cost recovery, in accord with the CoAG pricing principles. In the 2002 NCP assessment, the Council found that some local government water and wastewater service providers with more than 1000 connections did not achieve full cost recovery.

Next full assessment: The Council will assess New South Wales's implementation of the CoAG pricing obligations for urban water and wastewater service providers again in 2004. The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clauses 3(a) and (b); CoAG pricing principles

The New South Wales Government reported that 64 of 87 providers of nonmetropolitan urban water services with more than 1000 property connections were fully recovering costs for water supply in 2001-02. Most of the 23 providers with more than 1000 connections that were not fully recovering costs were smaller providers: 16 had between 1001 and 2000 connections; five had between 2001 and 10 000 connections; and two had over 10 000 connections. The two larger providers only marginally failed to achieve full cost recovery, each having an economic real rate of return of - 0.1 per cent. The local water utilities that did not achieve full cost recovery in 2001-02 represented about 3 per cent of the State's total property connections. New South Wales advised that the severity of the current drought has been a significant impediment to the achievement of full cost recovery.

The New South Wales Government advised in previous NCP assessments that IPART's 1996 principles for determining water supply and sewerage charges by local governments are relevant to utilities' achievement of the CoAG pricing obligations. IPART prepared the 1996 principles to assist local governments comply with CoAG water reform requirements, including full cost recovery and cost attribution, the implementation of a pay-for-use tariff for water supply where cost-effective, the removal of any land value component from annual charges for water supply and sewerage, and the explicit reporting of cross-subsidies.

The Government has taken additional steps since the 2002 NCP assessment to encourage best practice pricing (including full cost recovery, consumption-based pricing and trade waste charging) by local water utilities. Between October 2002 and February 2003, the Government conducted seven regional two-day workshops for local water utilities on best practice water supply, sewerage and trade waste pricing, and water supply, sewerage and stormwater developer charges. These workshops were attended by 305 delegates from 97 local water utilities.

In February 2003, the Government issued the Water Supply, Sewerage and Trade Waste Pricing Guidelines and pricing software to all local water utilities. These guidelines are intended to explain the benefits of best practice pricing for water utilities and their customers, and the environment, and to

provide utilities with the tools to move to full cost recovery and consumption-based pricing. The aim of the guidelines is to ensure all providers of nonmetropolitan urban water services that are not pricing on a best practice basis achieve full cost recovery and set water service prices on a consumption basis by July 2004. The Director-General of the Ministry of Energy and Water Utilities reiterated the importance of this in a circular in June 2003. The Ministry will work with providers of nonmetropolitan urban services that are still to apply best practice pricing principles over the next twelve months to assist them with water and wastewater pricing.

The February 2003 pricing guidelines require all utilities to prepare strategic business plans, including a 30-year financial plan that establishes an appropriate level of annual income from water, wastewater and trade waste charges. Local utilities have access to the NSW Financial Planning Model to assist their financial planning. Planning involves each utility negotiating the level of service provision with the affected community, and ensuring income from charges can meet projected recurrent costs (operations, maintenance and administration), the projected capital cost of new and replacement infrastructure, and any dividend and tax equivalent payments. By this 2003 NCP assessment, over 80 per cent of utilities had prepared at least a draft strategic business plan.

The New South Wales Government advised that it had adopted several other measures aimed at encouraging local water utilities to use best practice pricing.

- Best practice pricing is now a prerequisite for eligibility for any Country Towns Water Supply and Sewerage Program grants towards the capital cost of backlog infrastructure.

- The *Local Government (National Competition Policy Review) Act 2003* requires local water utilities to demonstrate compliance with best practice management guidelines before they pay dividends to general local government revenue. The best practice management guidelines include strategic business planning, integrated water cycle management, demand management, drought management and annual performance reporting.

- From 2003-04, best practice pricing by water supply and sewerage services is a condition for local governments applying for special variations to general income. On reaching its general income cap, a local government may apply for permission to levy additional rates for specific projects but may do so only if it demonstrates that its water utility is applying best practice pricing principles. The Department of Local Government is examining whether to extend this condition to applications for local government borrowings.

Discussion and assessment

In 2001-02, there were several local urban water and wastewater utilities with more than 1000 connections that did not achieve full cost recovery. These utilities represented only about 3 per cent of property connections in the State, however. Given that New South Wales has actively encouraged the achievement of full cost recovery since 2001-02, it is likely that the compliance at 30 June 2003 is greater than in 2001-02.

New South Wales's February 2003 best practice pricing guidelines are likely to help remaining local water utilities move to full cost recovery pricing. The Ministry of Energy and Utilities is finalising the guidelines for the best practice management of water supply and sewerage services referenced in the Local Government (National Competition Policy Review) Act. Further, the New South Wales Government increased support to local water utilities, and is introducing greater incentives for utilities to achieve full cost recovery. Eligibility for infrastructure grants, local governments' ability to extract a dividend from their utilities, and applications for special variations to general income will depend on local government business owners complying with the Government's best practice management and pricing guidelines. New South Wales expects that the twelve months from July 2003 will see most local water utilities achieve compliance with full cost recovery obligations. The Council will look in the 2004 NCP assessment for New South Wales to report on progress towards full cost recovery by local water utilities that are not yet recovering costs.

Rural water pricing: progress report

Progress report: New South Wales is to demonstrate progress towards achieving full cost recovery for irrigation districts. In the 2002 NCP assessment, the Council found many rural schemes were not achieving full cost recovery, but noted that the New South Wales approach was likely to continue to deliver improvements within an appropriate timeframe. The Council expected New South Wales to continue to pursue rural full cost recovery consistent with achieving rural full cost recovery by 2004, when the Council will assess compliance with this element of the CoAG water reform package.

Next full assessment: The Council will assess rural full cost recovery and pricing reform in 2004.

Reference: CoAG water reform agreement, clauses 3(a) and (b); CoAG pricing guidelines

In December 2001, IPART announced caps on annual price rises for bulk water supplied by the Government-owned business bulk water business, State Water. The tribunal capped annual price increases at 15 per cent plus the consumer price index for bulk water from regulated rivers, and 20 per cent plus the consumer price index for water from unregulated rivers and groundwater. This price structure will operate from 1 October 2001 until 30 June 2004. Because of variation among rivers in the current level of cost recovery, IPART estimated that most users (particularly on regulated rivers), would face real price increases of 8.5 per cent or less for full cost recovery to

be achieved The tribunal considered that greater price increases for users of water from unregulated rivers and groundwater are appropriate because prices and the level of cost recovery are much lower for these systems. IPART estimated that the proposed maximum prices would increase the proportion of recovered costs from 61 per cent in 2000-01 to 74 per cent in 2003-04.

In the 2002 NCP assessment, the Council noted that when this figure is disaggregated by water source the regulated rivers would recover 94 per cent of costs, the unregulated rivers would recover 31 per cent of costs, and groundwater would recover 32 per cent of costs from charges in the final year of the price period. The Council also noted IPART's advice that the cost base is likely to increase over time, because of the increasing need to mitigate environmental impacts. New South Wales considered that this variability makes it difficult to determine an end date for achieving rural full cost recovery.

New South Wales did not report on its progress towards rural full cost recovery for this 2003 NCP assessment. The Council will assess progress against CoAG reform obligations in 2004, where it will look for New South Wales to have made substantial advances towards rural full cost recovery particularly for unregulated rivers and groundwater sources.

River Murray Water cost allocation: progress report

Progress report: The Murray–River Basin states have different policies on passing on River Murray Water costs to water users. All Murray–Darling Basin jurisdictions are asked to outline their policy approach on this issue for the 2003 NCP assessment.

Next full assessment: The Council will assess rural full cost recovery and pricing reform in 2004.

Reference: CoAG water reform agreement, clauses 3(a) and (b); CoAG pricing guidelines

The Murray–River Basin States have different policies on passing on River Murray Water costs to water users. New South Wales and Victoria pass on to irrigators River Murray Water charges for bulk water, but apply different charging arrangements.[1] Charges are part fixed and part variable in New South Wales and mostly fixed in Victoria. South Australia does not pass on River Murray Water costs to irrigators. A consultancy study found that the expansion of permanent interstate trade is likely to be impeded by these differential charging arrangements for bulk water (Scrivco and Hassall and Associates 2003).

[1] River Murray Water recovers the full cost of constructing, operating, maintaining and renewing assets from the Murray–Darling Basin Commission's member governments. River Murray Water recovers 75 per cent of the cost of asset refurbishment and replacement from the States, with the Commonwealth Government paying the remaining 25 per cent. The States meet the full cost of the operation and maintenance of assets.

The Murray–Darling Basin Commission's independent audit of cost sharing arrangements considered that the following actions are necessary to provide clear price signals to water users.

- All River Murray Water costs need to be recognised and all subsidies and community service obligations (CSOs) need to be disclosed.

- Financial and pricing information for River Murray Water should be publicly available.

- States should disclose the level of subsidy and/or CSO per megalitre provided to each water business that receives bulk water from River Murray Water. Disclosure of the level of subsidy is particularly important because the Murray–Darling Basin States have different policies on passing on River Murray Water costs to water users.

IPART's 2001 bulk water prices determination provides information on the approach in New South Wales. In the prices determination, IPART allocated:

- all costs of water delivery to the Murray Valley;

- half of the Murray–Darling Basin Commission's water resource management costs to the Murray Valley (93 per cent), the Murrumbidgee Valley (5 per cent) and other inland valleys; and

- the other half of the Murray–Darling Basin Commission's water resource management costs to the Murray and Murrumbidgee valleys based on estimates of long-term extraction costs.

For each year of the current price determination, IPART then determines the shares of River Murray Water costs that should be recovered from users and from the New South Wales Government. IPART recognises that the costs incurred are not related exclusively to bulk water delivery. Some of these costs, for example, are incurred to meet other needs, such as environmental protection, flood mitigation and navigation. Some current and future costs also relate to past practices and activities.

IPART noted that, in the course of this review, much information had been gathered on the nature of the Murray–Darling Basin Commission's costs and on how the State's share of these costs is allocated to users. Given this new information, IPART asked the Department of Infrastructure, Planning and Natural Resources (which incorporates the former Department of Land and Water Conservation) to develop a robust and transparent method for allocating the Murray–Darling Basin Commission's water resource management costs to users for the next price determination, which is due to commence on 1 July 2004.

Asset valuation

Assessment issue: New South Wales is to determine water and wastewater infrastructure asset values for price-setting purposes using the deprival method unless an alternative approach can be justified. In the 2002 NCP assessment, the asset valuation method being applied in New South Wales for price setting by providers of nonmetropolitan urban water and wastewater services was not clear. In particular, the Council had no information on the optimisation of asset values (that is, whether current values are based on modern engineering equivalents). The Council also had insufficient information on the mechanisms that local governments were using to provide for the renewal of assets. Finally, the available information on pricing by providers of nonmetropolitan urban services did not transparently report the asset values used for price setting.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clause 3(a) and (b); CoAG pricing principles

Local water and wastewater utilities in New South Wales value water supply and sewerage assets on the basis of depreciated deprival value. Unless better data are available, service providers must value and depreciate water supply, sewerage and stormwater assets with reference to a schedule that lists the costs of modern engineering equivalents and indicates the typical economic life of assets. The New South Wales Government compiled a reference rates manual for local water utilities.

The February 2003 pricing guidelines require all utilities to prepare strategic business plans and a 30-year financial plan that establishes an appropriate level of income from water supply, sewerage and trade waste charges to demonstrate the long-term financial sustainability of each business. New South Wales also annually reports the economic real rate of return for each utility and the current replacement cost of each utility's assets for both water supply and sewerage in the NSW Water Supply and Sewerage Performance Monitoring Report.

Discussion and assessment

The optimised deprival value method that CoAG supports for valuing assets for price setting applies the following rules.

- If the asset would be replaced (meaning that replacement is economically viable), then it should be valued at a replacement cost that is suitably written down to account for the service potential already used and that is modified for technological and demand changes.

- If the asset would not be replaced — and if it would have been sold had the entity not been deprived of it — then the market selling value should be used.

- If the asset would not be replaced — and if it would have been retained and used until the end of its useful life had the entity not been deprived of it — then the asset should be valued at the net present value of the future stream of services that would have been forthcoming had it been retained.

Valuing assets at the written-down current cost — the approach taken by local water and wastewater utilities — is consistent with the CoAG pricing principles where those assets are to be replaced. Further, this approach is likely to enable the entity to maintain its service potential.

Valuing water and wastewater assets at the written-down current cost leads to efficient resource allocation decisions. The written-down current cost provides relevant information about both the current cost of providing the services and the current value of the resources deployed. Use of the State assets reference manual (which lists the costs of modern engineering equivalents and indicates the typical economic life of assets) provides for asset optimisation and appropriate asset consumption.

As noted above, the February 2003 pricing guidelines require all utilities to prepare strategic business plans and a 30-year financial plan that establishes an appropriate level of income from water supply, sewerage and trade waste charges to demonstrate the long-term financial sustainability of each business. The plan takes account of all projected revenue and expenditure over the next 30 years. In addition, New South Wales annually reports the economic real rate of return for each utility and the current replacement cost of each utility's assets for both water supply and sewerage in the NSW Water Supply and Sewerage Performance Monitoring Report, which is published on the web site of the Ministry for Energy and Utilities (energy.nsw.gov.au).

Externalities

Assessment issue: New South Wales is transparently to show how externalities (defined by CoAG for water pricing as the environmental and natural resource management costs attributable to and incurred by water businesses) are incorporated in water and wastewater prices. In the 2002 NCP assessment, the Council found that the externality component of both water and wastewater prices in New South Wales was not sufficiently transparent.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clause 3(a)(i); CoAG pricing principles; expert group report on externalities

Most environmental requirements on water businesses are imposed through environmental regulation or economic incentives such as pollution charges. The Environment Protection Authority issues wastewater system licences, for example, which stipulate the standard of discharge from treatment plants to the environment. For a number of years, the licences for treatment plants have required pollution reduction programs.

Water management licences issued by the Department of Infrastructure, Planning and Natural Resources cover environmental externalities associated with water access. The operating licences of the water utilities set out customer service delivery standards, customer protection requirements and broad environmental requirements relating to demand management and catchment management.

IPART incorporates externality costs in prices for the four providers of metropolitan water services and the Sydney Catchment Authority. At each pricing determination, IPART reviews the business's capital and operating expenditure over the previous price path period and its proposed expenditures for the new price period. IPART requires the businesses to provide details of their capital expenditure disaggregated to show expenditure to accommodate growth, expenditure for asset renewal and expenditure to meet regulatory requirements (such as expenditure to meet the requirements imposed by the Environment Protection Authority and the Department of Infrastructure, Planning and Natural Resources). IPART also requires information on the drivers of changes in operating expenditure, particularly those associated with meeting regulatory standards (such as the costs of operating wastewater treatment plants). IPART allows the efficient cost of a justified and deliverable capital expenditure program to meet environmental standards. Where these conditions are met, it allows the capital costs of major environmental projects such as an upgrade of wastewater treatment plants.

Operating costs relating to addressing environmental impacts are less clearly identifiable than capital costs. The operating costs of wastewater treatment plants, for example, are part of the core business of a water agency — namely, treating raw sewage to an acceptable standard before discharging it into the environment. Operating costs are likely to increase where, for example, a wastewater treatment plant is upgraded from primary to tertiary treatment.

Discussion and assessment

IPART's general approach is to incorporate externality expenditures in its pricing determinations where it considers that such expenditure is efficient and incurred by the service provider. The price of bulk water provided by the Sydney Catchment Authority to the Sydney Water Corporation includes, for example, a component for catchment management and remedial work.

The extent to which water and wastewater prices include externality costs is linked to the standards set by regulators. The Hunter Water Corporation, for example, incurred higher operating costs for new wastewater treatment facilities to meet new Environment Protection Authority standards. The older wastewater plants were simple gravity-fed trickling filter processes with limited pumping (and energy use), aeration and chemical requirements. Modern wastewater plants require significant energy and chemical inputs, and incur other costs such as the costs of transporting biosolids off site for recycling and/or disposal. Addressing environmental externalities via

regulatory and standard setting, where the cost to service providers of doing so is passed on through prices, has the effect of 'internalising' externalities.

The Council acknowledges that the regulated New South Wales water and sewerage prices incorporate externality costs incurred by the four providers of metropolitan urban water services and the Sydney Catchment Authority. The extent to which externality costs are incorporated is not, however, apparent from the published information on the price paths. Pricing arrangements for the nonmetropolitan urban service providers incorporate externality costs, but again there is insufficient information to determine the extent of this.

Taxes and tax equivalent regimes

Assessment issue: New South Wales is to apply tax and/or tax equivalent regimes for metropolitan and regional urban water and wastewater services. In the 2002 NCP assessment, New South Wales advised that statutory requirements for ringfencing prevent the direct implementation of tax equivalent regimes and shareholder dividend payments regimes by local government water service providers.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clause 3(a)(i); CoAG pricing principles; Expert group report on tax equivalent regimes

The water and wastewater prices of two of the four providers of metropolitan water services — the Sydney Water Corporation and the Hunter Water Corporation — include taxes or tax equivalents via the pricing determinations by IPART. The 2003 price determinations for the Gosford City Council and the Wyong Shire Council did not include tax equivalents.

The *Local Government Amendment (National Competition Policy Review) Act 2003* references best practice management guidelines that require all local water utilities to make annual tax equivalent payments. The February 2003 best practice pricing guidelines for local water utilities make clear that prices should incorporate annual tax equivalent payments.

Discussion and assessment

The Local Government Amendment (National Competition Policy Review) Act removed the previous constraint on the incorporation of taxes and tax equivalents in local utility water and wastewater pricing. The arrangements in New South Wales for applying taxes and tax equivalents and recovering these in the prices of water and wastewater services are therefore consistent with CoAG water pricing principles.

Dividends

Assessment issue: Dividends, where required, are to be set at a level that reflects commercial realities and simulates a competitive market outcome. In the 2001 NCP assessment, the Council noted dividend payments by the Sydney Water Corporation and the Hunter Water Corporation that were less than 100 per cent of pre-tax earnings. New South Wales provided no information on the distribution of dividends by local government water utilities.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clauses 3(a) and (b); CoAG pricing guidelines

The New South Wales Government expects Government-owned businesses to make dividend payments that are comparable to alternative commercial investments of similar risk. The Government adopts the private sector definition of dividends, as provided by the *Corporations Act 2001* (Cwlth), whereby a dividend may be paid out of only the profits of a company.

Dividend targets and actual payments are negotiated between the Government (as the shareholder) and the board/management of each business, with reference to the post-tax profits of the business. This approach recognises Government-owned businesses' payment of income tax equivalents as a business expense. Government businesses pay a dividend if cash remains after allowing for working capital, the funding of acceptable investments and an appropriate contingency.

The Sydney Water Corporation, the Hunter Water Corporation and the Sydney Catchment Authority pay dividends. The water and wastewater businesses of the Gosford City Council and the Wyong Shire Council do not pay dividends. New South Wales indicated that information on dividend payments by the Government-owned water businesses is publicly available.

- The Sydney Water Corporation provided a (whole-of-business) dividend of A$53.4 million (or 60 per cent of net profit after tax) in 2001-02 and A$103.7 million (or 32.7 per cent of net profit after tax) in 2000-01 (WSAA 2003).

- The Sydney Catchment Authority provided a (whole-of-business) dividend of A$29.6 million (or 114.9 per cent of net profit after tax) in 2001-02 and A$10.6 million (or 56.8 per cent of net profit after tax) in 2000-01 (WSAA 2003).

- The Hunter Water Corporation provided a (whole-of-business) dividend of A$31.1 million (or 99.2 per cent of net profit after tax) in 2001-02 and A$30 million (or 69.5 per cent of net profit after tax) in 2000-01 (WSAA 2003).

The Local Government Amendment (National Competition Policy Review) Act provides for local water utilities to pay dividends from their water supply and sewerage businesses. Any dividend payment may be made only from the local water utility's profit. Payment of dividends depends on local government owners complying with the best practice management guidelines that are referenced in the Act. New South Wales advised that these guidelines impose requirements to:

- complete a strategic business plan with a 30-year financial plan;
- adopt best practice water supply, sewerage and trade waste pricing;
- adopt best practice water supply and sewerage developer charges;
- adopt best practice trade waste management; and
- undertake annual performance reporting and monitoring.

Discussion and assessment

The Council considers that a reasonable interpretation of the level of dividend to be paid according with the CoAG requirement for 'commercial reality' is the corporations law requirement that dividends be paid only out of profits (the current year's profit as well as accumulated retained profits). This approach provides some safeguard against water and wastewater service providers having insufficient financial resources to properly conduct their businesses. It is also consistent with the competitive neutrality obligations of the intergovernmental Competition Principles Agreement, which require government owned businesses to face the same costs and pressures as private sector businesses.

The approach adopted by New South Wales requires government businesses to pay dividends only out of profits. This approach accords with the CoAG pricing principles. The 2001-02 dividend distribution by the Sydney Catchment Authority exceeded net after tax profit earned in 2001-02, but was drawn from accumulated profits and met the corporations law stricture.

As discussed in the section above on full cost recovery, the Local Government Amendment (National Competition Policy Review) Act contains a strong incentive for local water utilities to adopt the Government's best practice management and best practice pricing guidelines. Local governments' capacity to require their utilities to provide a dividend will depend on their compliance with the management and pricing guidelines.

Consumption-based pricing

Assessment issue: Prices are to reflect the volume of water supplied, to encourage more economical water use and to defer the need for investments in costly water infrastructure. Cross-subsidies should ideally be removed where they are inconsistent with efficient service provision and use. Any remaining cross-subsidies should be transparently reported. In the 2002 NCP assessment, the Council found that several water businesses with more than 1000 connections were yet to adopt consumption-based pricing regimes or to justify using a different approach. In particular, some businesses were setting prices on the basis of property values and/or were providing free water allowances, which had the potential to result in cross-subsidies between different customer categories and/or different service types. New South Wales had no mechanism for identifying, measuring and reporting potential cross-subsidies.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clauses 3(a)–(c)

In May 2003, IPART set a price path for the Sydney Water Corporation extending to 30 June 2005. The price path will remove all of the corporation's remaining property-based charges. The three other IPART-regulated providers of metropolitan urban water services (the Hunter Water Corporation, the Gosford City Council and the Wyong Shire Council) charge for services via consumption-based tariffs.

At August 2003, 61 of 87 local water utilities with more than 1000 connections were pricing their water services on a consumption basis. Five local water utilities with more than 1000 connections indicated that they will adopt consumption-based pricing by June 2004, and New South Wales expects other local water utilities to resolve to implement consumption-based pricing from 30 June 2004. Of the 26 utilities that were not basing water prices on use, some two thirds employed an access charge for water supply and provided a free water allowance (up to 400 kilolitres annually). Eight of the 26 reduced their free water allowances over the period 2001-02 to 2002-03. As at May 2003, New South Wales reported 22 local water utilities as employing liquid trade waste charges.

The combined property connections of the local utilities that do not employ use-based water prices represent about 3 per cent of connections in New South Wales. All but one of these utilities are located west of the Great Dividing Range, mostly supplying towns that are experiencing little economic growth and that are significantly affected by the current drought. The utilities have focused on maintaining security of supply under existing pricing structures.

New South Wales pointed in previous assessments to the importance of the 1996 IPART pricing principles for local water utilities in setting the direction of the utilities' pricing behaviour. The IPART guidelines contain the following observations and recommendations on use-based water pricing.

- A simple two-part tariff, with a single use component based on the marginal cost of provision, is preferred.

- Water charges that have a prepaid water allowance contain undesirable elements of cross-subsidy, which mean that small users are helping to pay for the costs of water used by larger volume consumers. These cross-subsidies are far from transparent and are unfair and undesirable.

- Some small systems may gain little in efficiency terms from moving to a 'user pays' system. Such systems include those in which extractive demands are low compared with water availability, those in which the marginal cost of supply is low, and those in which customers are unmetered and metering costs are high. Few water supply systems are likely to have these characteristics however.

- The net benefit of volumetric charging for domestic sewage management is yet to be demonstrated in most circumstances.

- The 'free water allowance' provided by many local governments is considerably more than the minimum requirement that possibly constitutes a social good. Individual consumers of water should bear the full cost of service provision when the full benefits of consumption accrue to them alone. (IPART cited 15 kilolitres per person per year and 200 kilolitres per domestic connection per year as examples of the levels at which discretionary use may begin.)

- Subsidised water consumption reduces the incentive to explore options such as water reuse, use of grey water, or the designing of parks and gardens to minimise water use.

As noted in the discussion on full cost recovery, the New South Wales Government issued the Water Supply, Sewerage and Trade Waste Pricing Guidelines and supporting software in February 2003. New South Wales considers that the guidelines comply with the CoAG strategic framework for water reform, the CoAG pricing principles, and IPART's pricing guidelines for local water authorities. The February 2003 guidelines explain the rationale for moving to consumption-based water tariff and trade waste arrangements and offer support material to guide local water utilities. The guidelines also indicate that New South Wales requires all local water utilities providing nonmetropolitan urban water services to disclose cross-subsidies in their annual financial statements and in their development servicing plans.

The guidelines set the objective of encouraging local water utilities that were not implementing best practice water supply, sewerage and liquid trade waste pricing at June 2003 to move to best practice pricing by June 2004. Best practice pricing will be a prerequisite for eligibility for the Government's Country Towns Water Supply and Sewerage Program grants towards the capital cost of backlog infrastructure. It will also be a prerequisite for the payment of a dividend by the water supply or sewerage business to the local government owner.

Regarding trade waste, the best practice guidelines state that each local water utility responsible for sewerage should levy appropriate trade waste fees and charges for all its liquid trade waste dischargers as part of its next annual management plan. The charges proposed are based on the IPART determination for 2002-03 charges for the Sydney Water Corporation and the Hunter Water Corporation.

Discussion and assessment

The majority of consumers of water and wastewater services face consumption-based prices in New South Wales — 61 of 87 providers of nonmetropolitan urban water services with more than 1000 property connections (representing 97 per cent of properties serviced by utilities with 1000 plus connections) adopted consumption-based pricing and a further five are considering adopting a use-based approach during 2003-04. All except one of the local water utilities that are yet to introduce consumption-based pricing are smaller entities servicing areas west of the Great Dividing Range that are significantly affected by the drought. The best practice pricing guidelines issued by the New South Wales Government in February 2003 should help remaining local water utilities move to consumption-based pricing.

The remaining availability of relatively high free water allowances may undermine use-based pricing objectives. While the Council acknowledges that an access charge with a low free water allowance/excess may approximate consumption-based charging (where, for example, the free water allowance provides water sufficient only to meet public health requirements, and where an appropriate consumption fee is charged for discretionary uses above the free allowance), many of the 26 New South Wales water utilities that provide a free water allowance set the allowance above annual household consumption and well above what would be necessary to meet public health requirements.[2]

Keeping in mind the relatively small proportion of the State's property connections that are not facing use-based prices for water and the actions taken by the New South Wales Government to assist the implementation of use-based pricing, the Council considers that New South Wales satisfactorily progressed its consumption-based pricing obligations for this 2003 NCP assessment. There are, nevertheless, several smaller local government water service providers that are yet to set water prices on a consumption basis. The Council will consider New South Wales's progress with the implementation of consumption-based pricing by these water service providers again in the 2004 NCP assessment.

[2] Average annual water consumption by households in 1999-2000 was 220 kilolitres.

Community service obligations

Assessment issue: New South Wales is to transparently report the size and nature of community service obligations (CSOs) provided by providers of urban water and wastewater services. In the 1999 NCP assessment, the Council concluded that New South Wales's delivery of metropolitan and nonmetropolitan urban CSOs was consistent with CoAG obligations.

Next full assessment: The Council will conduct a full assessment across the entire package of reforms in 2005.

Reference: CoAG water reform agreement, clause 3(a)(ii)

Under the New South Wales Government's social policy program, CSOs are defined as noncommercial activities that are pursuant to a Government directive, have a clear social benefit and are funded from the State Budget. Where the Government requires service providers to provide services to consumers at less than the full cost of the service, this discount must be disclosed and made transparent. Ideally, the service should be funded as a CSO, with funding equivalent to the difference between the discounted charge paid by consumers and the full charge of the service.

The providers of metropolitan urban water services receive CSO payments from the State Budget, primarily pensioner rebates and the exemption of certain property categories having to pay access charges. The Local Government Act requires local governments to reduce water supply and sewerage charges for eligible pensioners by 50 per cent, up to a maximum reduction of $87.50 per year for each service. The Department of Local Government then reimburses a local government for 55 per cent of the pensioner rebate provided. The New South Wales Government also provides financial assistance to local governments under its Country Towns Water and Sewerage Program towards the capital cost of backlog works required to meet public health, environmental standards and reasonable levels of service for current populations.. The local governments are responsible for meeting the full cost of works to meet growth needs and renewals.

The water supply, sewerage and trade waste pricing guidelines state that a decision on whether to provide CSOs to nonrateable properties is a matter for each local government to determine. The guidelines indicate that over 70 per cent of local government water utilities provide no water supply CSOs to nonrateable properties. Where CSOs are proposed, the guidelines expect only a reduction in the water supply access charge. They advocate charging for water used by nonrateable properties on the same basis as for nonresidential customers to provide an appropriate pricing signal and encourage efficient water use.

Assessment

The approach to evaluating and reporting CSOs in New South Wales is consistent with the CoAG water pricing principles.

2.2 Water management: water rights and provisions to the environment

Establishment of water rights systems

Assessment issue: Governments are to implement comprehensive systems of water allocations or entitlements backed by separation from land title and clear specification in terms of ownership, volume, reliability, transferability and, if appropriate, quality.

At the time of the 2002 NCP assessment, New South Wales was converting its system of five-year licences under the *Water Act 1912* to a new system of 15-year access licences under the *Water Management Act 2000*. It was also working on a system for registering water entitlements.

For the 2003 NCP assessment, the Council indicated New South Wales needed to have established: the new access licence system; Regulations under the Water Management Act defining the arrangements for licence renewal; and the new registry system.

Next full assessment: The Council will assess the Government's implementation of the new access licensing system and registry in a supplementary assessment in February 2004.

Reference: CoAG water reform agreement, clause 4(a)

At the time of the 2002 NCP assessment, New South Wales was converting its system of five-year licences under the *Water Act 1912* to a new system of 15-year access licences[3] under the *Water Management Act 2000*. It was also working on a system for registering water entitlements.

Under the Water Management Act, all water extractions are required to be licensed.[4] Licences are separate from land title, transferable, divisible and enforceable. It is not necessary to own or occupy land to hold an access licence. Licences include a share component (specifying shares in the available volume of water from the relevant water source) and an extraction component (specifying times, rates, circumstances and locations for extractions). All licences are categorised according to the priority of access (for example, in relation to regulated rivers, there are high security and general security licences). Reliability is further determined by water sharing plans, which seek to provide security of access for all water users, including the

[3] Licences for water utilities (including local council water service providers) are issued for 20 years.

[4] Licences are not required for the basic water rights of landholders for domestic and stock use, harvestable rights (a percentage of rainfall run-off captured in a farm dam) and native title rights and interests.

environment, during their 10-year term (see next section on provision of water to the environment). Water access licence holders are able to claim compensation for reductions in water access made during the term of a water sharing plan that are inconsistent with the provisions of the plan. The Government was giving priority to converting licences for water sources covered by its first round of water sharing plans (which cover about 80 per cent of the State's water).

Regulations under the Water Management Act define the arrangements for licence renewals. The Regulations give priority to existing licence holders. Current licence holders can apply for renewal before a licence expires. Licences are expected to be renewed subject to standard environmental assessments. The new licensing and approvals system was scheduled for implementation on 1 January 2003.

The access licence register is intended to give licence holders certainty in their entitlement to water, so that access licences can be used as mortgage security in the same way that property can. Third party interests may be registered. The register is to be administered by the Land and Property Information Office and is to be publicly available. It was to be fully operational by January 2003.

Reform progress

On 17 June 2003, the Minister for Natural Resources announced that the new water management arrangements, including the new licensing system, registry and water sharing plans, would not commence until 1 January 2004 (Minister for Natural Resources 2003). The Minister indicated that the deferral was in response to work by CoAG on the issue of sustaining the nation's river systems and the announcement by the Deputy Prime Minister on 4 June 2003 foreshadowing the development of a new intergovernmental agreement on water for consideration by CoAG in August 2003.

From January 2004, the Government will commence issuing around 8800 new water access licences to replace existing licences in the areas covered by the gazetted water sharing plans. The Department of Planning, Infrastructure and Natural Resources is verifying the ownership of existing licences, including third party interests. The department has established a prototype of the water access rights register and is testing this. The register will initially include information on the licences applying to areas covered by the first round of water sharing plans. Licences in other areas will continue to be administered under the Water Act until they have been converted to new licences under the Water Management Act.

Submissions

The NSW Irrigators' Council reiterated concerns about the water entitlements system. It considered, in particular, that 'complete uncertainty' exists before and after each water sharing plan regarding the value of entitlements, the 10-year life of a plan is not sufficient for long-term capital investment and the Act provides significant scope for the Minister to use administrative powers, further attenuating entitlements (NSW Irrigators' Council 2003, p. 2). In addition, it noted several transitional and administrative issues in moving to the new registry system (including the transfer of existing mortgages and interests) on which discussions were continuing with the Government.

Macquarie River Food and Fibre raised similar concerns regarding the security of entitlements. It highlighted reductions in entitlements, without compensation, under the water sharing plan for the Lower Murray Groundwater, including significant up-front cuts and reductions during the term of the plan. It emphasised the need for structural adjustment assistance or compensation to assist in reducing overallocations. In correspondence, Macquarie River Food and Fibre criticised the former Minister's decision to address water shortage problems in Nyngan and Cobar by providing water to the towns that would otherwise have been available to irrigators with general security allocations. Macquarie River Food and Fibre considered that this further illustrated the scope for licence holders' security to be eroded.

In contrast, the Environmental Defender's Office (New South Wales) considered that the arrangements under the Water Management Act provide a secure right for consumptive users and are consistent with CoAG requirements.

Discussion and assessment

The Council concluded in previous NCP assessments that the new system of access licences and water sharing plans and the water access rights register are consistent with CoAG obligations on water property rights. The New South Wales Government deferred the commencement of these arrangements until 1 January 2004. The Council accepts that a primary driver for the deferral was the foreshadowed CoAG consideration of national water industry arrangements. As a result of the national process, the Council's 2003 assessment of the New South Wales Government's implementation of its access licensing and registry system needs to be delayed. The Council will finalise its 2003 assessment of these matters in February 2004.

Provision of water to the environment

Assessment issue: Governments are to formally determine allocations or entitlements to water, including appropriate allocations to the environment to enhance/restore the health of river and groundwater systems. In allocating water to the environment, governments are to have regard to the work undertaken by the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) and the Australian and New Zealand Environment and Conservation Council (ANZECC). Environmental requirements, wherever possible, are to be determined on the best scientific information available and have regard to the intertemporal and interspatial water requirements that maintain the health and viability of river systems and groundwater basins. Governments needed to have made substantial progress in implementing arrangements to provide water to the environment by 2001, including allocations in all river systems that are overallocated or deemed to be stressed. Allocations must be substantially completed by 2005 for all river systems and groundwater resources identified in each jurisdiction's agreed implementation program.

At the time of the 2002 NCP assessment, New South Wales was still to finalise its State Water Management Outcomes Plan (SWMOP) and the first round of water sharing plans for 39 priority river and groundwater systems (covering about 80 per cent of the State's water). The Council decided to conduct a supplementary 2002 NCP assessment to consider these matters. Conducted in April 2003, the supplementary assessment found that New South Wales had finalised the SWMOP and 35 water sharing plans, but identified other actions New South Wales needed to take to meet all of the State's 2002 water reform obligations. For the 2003 NCP assessment, the Council indicated New South Wales needed to have:

- substantially progressed (or preferably finalised) the four water sharing plans remaining from its first round of 39 water sharing plans;
- published, or at least made available to the Council, the information required to finalise the Council's assessment of whether New South Wales has had due regard in its water sharing plans for principles 4, 5, and 7 (of the ARMCANZ/ANZECC National Principles for the Provision of Water for Ecosystems);
- finalised the implementation programs needed for the gazetted water sharing plans to commence in July 2003; and
- committed to a satisfactory process (ensuring effective community consultation) and timetable for developing water sharing plans for the State's remaining stressed or overallocated river systems.

Next full assessment: The Council will finalise the 2003 NCP assessment of New South Wales's progress in implementing CoAG obligations on the allocation of water to the environment in stressed and overallocated rivers in February 2004.

Reference: CoAG water reform agreement, clauses 4(b–f)

At the time of the 2002 NCP assessment, New South Wales was still developing its water management arrangements and was yet to determine the amount of water that would be provided to the environment in overallocated and stressed river systems. The Government:

- had released an interim State Water Management Outcomes Plan (SWMOP), setting the overarching policy, targets and strategic outcomes for the development, conservation, management and control of the State's water sources, for public consultation in October 2001; and

- was developing water sharing plans for 39 regulated and unregulated river and groundwater systems covering the majority of the State's water — when gazetted, the plans lock in water sharing and operation rules (including rules governing allocations to water users and the environment) for 10 years.

Because the New South Wales Government was still developing the SWMOP and its first-round water sharing plans, the Council was unable to assess whether the State had met its obligations on environmental allocations for the 2002 NCP assessment. The Council supported, however, the direction being taken by New South Wales in the interim SWMOP. The Council also accepted that New South Wales was facing a difficult and complex task in balancing the wide ranging views and opinions of interest groups with the technical information required to make appropriate allocations in the water sharing plans. In addition, New South Wales has had interim environmental flow rules for regulated river systems in place since 1998. Accordingly, in the 2002 NCP assessment, the Council considered it reasonable for New South Wales to have more time to finalise the SWMOP and the first round of water sharing plans, and thus deferred its consideration of the State's progress in meeting CoAG obligations on stressed or overallocated river systems to a supplementary assessment.

In the supplementary assessment in April 2003, the Council found that New South Wales had finalised its SWMOP (in December 2002) and subsequently finalised 35 of the 39 first-round water sharing plans. The Council considered that the SWMOP should contribute significantly to the long-term sustainable use of water resources in New South Wales, provided that the water sharing plans (and catchment blueprints and subsequent water management plans) substantially adopt the relevant SWMOP targets. The Council raised one question concerning daily extraction components for unregulated rivers, which (under the relevant SWMOP target) will not be specified in licences for 20 per cent of stressed unregulated rivers until at least 2008 (significantly later than the target date set by CoAG).

New South Wales advised that many unregulated rivers, including some stressed unregulated rivers, may not warrant the sophisticated level of management inherent in daily flow sharing arrangements. For these rivers, which account for a relatively minor share of overall water diversions, New South Wales advised that it would introduce a sufficient degree of management to protect the environment and the rights of other users. In the meantime, annual allocations and limits on extractions during low flows are in place. The Council indicated in the supplementary assessment that it would look for the water sharing plans to be developed to appropriately address environmental needs in the remaining stressed unregulated rivers.

Further, New South Wales advised that the environmental water allocations in the water sharing plans reflect trade-offs between the environmental needs and socioeconomic factors. At the time of the supplementary assessment, information on the anticipated environmental impacts and on the extent of and reasons for the trade-offs was not publicly available, although New South Wales was preparing public information sheets on its new water management arrangements, including the expected environmental benefits. Accordingly, the Council had insufficient information to assess the Government's regard for four of the 11 relevant ARMCANZ/ANZECC National Principles for the Provision of Water for Ecosystems (principles 4, 5, 7 and 9).

- Under principle 4, governments need to go as far as possible to provide water to sustain ecological values, while recognising the existing rights of water users. In the supplementary assessment, the Council acknowledged that the appropriate allocation of water for consumptive and environmental purposes is ultimately a matter for judgment based on full information about the ecological requirements of systems and the socioeconomic impacts. Without information on the anticipated environmental impacts and on the extent of and reasons for the trade-offs made in the environmental allocations for each plan, the Council could not determine whether New South Wales had gone as far as possible to meeting environmental objectives.

- Under principle 5, where environmental water requirements cannot be met due to existing uses, government must take action (including reallocation) to meet environmental needs. The water sharing plans for some stressed regulated and unregulated rivers and groundwater sources provide additional water for environmental requirements. New South Wales argued that the rules in several other plans provide for improved environmental outcomes without taking additional water from users, and that the extraction levels under the existing environmental flow rules are appropriate for some rivers and have been reflected in the relevant water sharing plans. At the time of the supplementary assessment, however, New South Wales had not provided the Council with information on how the plans meet environmental needs or with evidence on the appropriateness of existing environmental flows.

- Under principle 7, accountabilities in the management of environmental water provisions should be transparent and clearly defined. While the Government undertook considerable public consultation during the preparation of the water sharing plans, at the time of the supplementary assessment it had not provided the Council with information on the manner in which environmental science was considered and incorporated in the plans, particularly for surface water. There was also little information available on the extent to which the various rules and limits in the plans are expected to achieve environmental outcomes.

- Under principle 9, all water uses should be managed in a manner that recognises ecological values. The Council considered that the New South Wales Government had shown regard for this principle in developing its

Water Management Act and setting the targets in the SWMOP. It noted, however, that the Government had assessed none of the water sharing plans as fully meeting SWMOP targets of relevance to ecological values. Although the plans will have at least an indirect impact on water use, the Council accepted advice from New South Wales that mechanisms other than water sharing plans are more significant in managing water use in a manner that recognises ecological values. The Council indicated that it would consider the Government's regard for principle 9 when it looks at the State's implementation of other relevant elements of the CoAG water resource policy (including, for example, the catchment blueprint process, water quality objectives for each major river system, and future water management plans that extend beyond water sharing) in future NCP assessments.

In the supplementary assessment, the Council identified other actions that New South Wales needed to take to meet all of the State's 2002 water reform obligations. New South Wales needed to:

- substantially progress and preferably finalise by the 2003 NCP assessment the four remaining first-round water sharing plans (the plans for the Hunter River, the Orara River, the Lower Murray groundwater source and the Great Artesian Basin);

- publish, or at least make available to the Council, the information required to finalise the Council's assessment of the Government's regard for principles 4, 5 and 7 (of the National Principles for the Provision of Water for Ecosystems) in the water sharing plans;

- finalise the implementation programs needed for the gazetted water sharing plans to commence; and

- commit to a satisfactory process (ensuring effective community consultation) and timetable for developing water sharing plans for the State's remaining stressed or overallocated river systems.

Given the progress made by New South Wales, and the prospect that it would make available information on the effect of its water sharing plans, the Council agreed to finalise its consideration of the State's environmental provisions for stressed and overallocated river systems in the 2003 NCP assessment.

Reform progress since the 2002 supplementary assessment

New South Wales deferred the commencement of its water sharing plans from I July 2003 to 1 January 2004 following the Deputy Prime Minister's announcement on 4 June 2003 foreshadowing a new intergovernmental agreement on water. The New South Wales Minister for Natural Resources indicated that the Government remains committed to the concept of water sharing, stressing that the delay is not a signal for an overhaul of water sharing rules already agreed after extensive consultation. He considered, however, that it would be premature and counterproductive for the State to proceed with the water sharing plans without knowing how they would fit within any new national model.

Since the supplementary assessment, New South Wales published summary guides and fact sheets on almost all of the 35 completed water sharing plans. These provide an overview and explanation of the main elements of each of the plans. The guides include a summary of the environmental water provisions in the plans.

New South Wales provided the following information on its progress in addressing the other matters identified in the 2002 supplementary NCP assessment.

- Of the four remaining first-round water sharing plans, the plan for the Hunter River was finalised but awaiting Ministerial approval. The Government was reviewing a draft of the Great Artesian Basin plan and, following additional modelling, expected a draft of the Orara River plan by the end of October 2003. Some issues remained to be resolved in the plan for the Lower Murray groundwater source.

- Drafts of the implementation programs (needed for the gazetted water sharing plans to commence) were being reviewed by each of the water management committees. The implementation programs would be finalised in time for the plans to commence in January 2004.

- The Government was considering how to progress water sharing arrangements for the State's remaining stressed or overallocated river systems and other river and groundwater systems. New South Wales noted that the first-round plans covered almost all regulated rivers, around 7–8 per cent of unregulated rivers and 20 per cent of groundwater sources.

Submissions

The Environmental Defender's Office raised several concerns with the rigour of the water sharing planning process in New South Wales. It stated:

> - *despite legislative provisions prioritising environmental water needs, consumptive entitlements are being given a more secure right through water sharing plans;*
>
> - *water management planning issues are not being coordinated on a statewide basis — water sharing plans have been prepared in an inconsistent and ad hoc manner that does not give effect to the principles of the CoAG agreement;*
>
> - *the environmental requirements of the CoAG agreement have not been taken seriously by either the Government or water management committees preparing water sharing plans — water sources have not been classified according to their health, stress and conservation values and benchmarks for environmental flows are not being based on the best, or even considered, available scientific evidence;* [and]
>
> - *water sharing plans are also failing to adhere to the statutory requirements of the Water Management Act in relation to providing environmental flow rules and mechanisms to address the performance of plans against the objectives of the Act and the CoAG requirements.* (EDO 2003, p. 2)

Macquarie River Food and Fibre considered that the framework, capability and resources required to monitor the impacts of environmental flows are lacking. It also pointed to a lack of commitment to 'active and adaptive management' in protecting the environment, noting that it is easier for governments to set hydrological goals than ecological goals. It noted, however, that the water sharing plan for the Macquarie River is an exception to this Statewide approach:

> … *our community pushed for a community driven, active management focus, rather than arguing about how many more megalitres should be taken from irrigators for the environment.* (MRFF 2003, p. 8)

Both the NSW Irrigators' Council and Macquarie River Food and Fibre reiterated concerns regarding deficiencies in the public consultation process on the draft water sharing plans in 2002. In particular, the NSW Irrigators' Council regarded the process for considering public submissions to be less than satisfactory, with the Government giving water management committees only limited opportunity to account for the submissions. While noting that the Government regularly consults the irrigation industry on regulatory and policy changes, based on its experience with the SWMOP and the water sharing plans, Macquarie River Food and Fibre commented:

> … *irrigation stakeholders are convinced that the current mode of consultation delivered by the State Government is not genuine, but their demonstration that they are meeting CoAG requirements by conducting public meetings and allowing submissions.* (MRFF 2003, p. 9)

Discussion

The guides and fact sheets published by New South Wales since the supplementary assessment provide useful information on the plans for licence holders and the wider community. While the guides summarise the environmental water provisions in the plans, only some provide information on the extent to which environmental flows (or recharge) will be improved and/or examples of the expected environmental benefits. Only a few (mostly the guides for the groundwater plans) indicate the extent to which the extraction limits and other rules in the plans are expected to lead to the sustainable use of the water source. None of the guides provides information on the extent of the trade-offs made in deciding on the environmental allocations or on the rationales for the trade-offs. The guides generally also contain little information on the manner in which the water management committees considered and incorporated the environmental science in developing the plans. New South Wales advised that the guides and fact sheets were not intended to provide detailed information on the environmental benefits of the water sharing plans. It proposes to issue more detailed information on these benefits in the near future.

New South Wales has progressed, but not finalised, the other matters identified by the Council in the supplementary 2002 NCP assessment. One of the four remaining first-round water sharing plans has been finalised (but is still to be approved) and the other three plans have been progressed. The implementation programs for the gazetted water sharing plans appear to be on track for the revised commencement date of 1 January 2004. New South Wales was, however, still considering how to progress water sharing arrangements for the remainder of the State (including for the remaining stressed or overallocated river systems).

In relation to the compliance of its water sharing plans with the ARMCANZ/ANZECC National Principles for the Provision of Water for Ecosystems (particularly principles 4, 5 and 7), New South Wales advised the following.

- The water management committees responsible for developing the plans had a wide representation from the relevant management agencies, the local community, industry groups and environmental interests.

- In developing the plans, the committees were provided with available technical and scientific information and, wherever possible, details of scientific modelling on the effects of alternative environmental flow regimes.

- The committees discussed development of the plans with local communities. All plans were made available as drafts for public consultation. The draft plans included what was known about possible water-dependent ecosystems as well as relevant technical information, and further details were presented at public meetings.

- The nature and extent of public consultation varied between plans. While some committees undertook extensive consultation throughout the entire process, in other cases most of the consultation occurred after release of the draft plan. The committees subsequently considered the responses from the public before finalising their recommendations to the Minister.

- Before the plans were finalised, each committee was provided with an assessment of the extent to which its plan demonstrated progress towards relevant targets set in the overarching SWMOP. The targets are aspirational and the objective is that the water sharing plans contribute to the achievement of the targets over time.

- The plans identify requirements for further studies to improve the understanding of environmental water requirements. Some plans provide scope for amendments (within defined limits) during their 10-year life in response to these studies.

- Each plan includes performance indicators and requirements for monitoring and public reporting against these indicators. If monitoring against the performance indicators shows the plans are leading to environmental outcomes that are unacceptable to the community, the plans can be amended during their 10-year life, subject to the payment of compensation to affected licence holders, or on renewal at the end of the 10-year period (without compensation).

New South Wales considers that the approach it adopted in developing the plans and the environmental provisions in the final plans comply with CoAG requirements. The water management committees, as the representatives of the community, made their decisions on the trade-offs between environmental and socioeconomic objectives on the basis of the best available knowledge of the environmental effects and of the communities' views of acceptable outcomes obtained via public processes. New South Wales considers, therefore, that the Council should not need details of how the water management committees weighed up the relevant information to reach decisions on the trade-offs or on the extent of the trade-offs made.

Several aspects of the water sharing process in New South Wales suggest the likelihood of better environmental outcomes than are available under the State's former processes. The plans allocate water for extractive and environmental purposes, so recognise the environment as a legitimate user of water. For the unregulated rivers, the plans provide the first formal allocation of water to the environment. The plans were developed by water management committees, which had access to a range of scientific and other information, and involved an extensive public process. The plans incorporate

processes for monitoring environmental outcomes and provide for increased environmental allocations if monitoring outcomes indicate this is warranted.

A key objective of the ARMCANZ/ANZECC national principles is to sustain and, where necessary, restore ecological processes and the biodiversity of water-dependent ecosystems, recognising that adequate water flow is critical for maintaining natural ecological processes and biodiversity. Achieving this objective may involve reallocation of water from existing uses, although there is an acknowledgment of the existing rights of other users of water. A key issue in New South Wales is the nature of the trade-offs made when the amount of water identified for environmental flows is less than the best available science recommends. The CoAG water agreement acknowledges the existing rights of water users, meaning that water management committees developing environmental flow regimes may recommend a flow regime that does not meet the scientifically recommended regime in the shorter term. Such decisions imply that the community has agreed to accept the potential consequences. The Council considers, therefore, that there must be sufficient public information on the environmental risks posed by the negotiated flow regimes to allow the community to understand and comment on the water management committee's decisions on water use. Moreover, the water management committees need to be representative of all interests, and the flow regime and associated river health activities must be likely to deliver recommended environmental flow objectives within a reasonable period. In the supplementary 2002 NCP assessment, the Council accepted that the water management committees were generally representative of the community and were provided with the information necessary to make their decisions, to the extent this information was available.

While accepting that the water sharing plans will provide improved environmental outcomes in most cases, the Council has not been able to conclude, from the information provided by New South Wales, whether the plans satisfy the CoAG requirement to allocate an appropriate amount of water to the environment, determined wherever possible on the basis of the best available science and accounting for the existing rights of other water users. Apart from the summary guides and fact sheets already published, New South Wales advised that it intends to provide additional, forward-looking information on the environmental impacts of its water sharing plans. New South Wales will not, however, provide this information until any implications for its water sharing plans resulting from the national work foreshadowed by the Commonwealth Government are clear. New South Wales advised that it does not intend to revisit the basis for the decisions on flows in the plans.

Regarding consultation problems with the development of the SWMOP and the first round water sharing plans in 2002, New South Wales undertook in the 2002 supplementary assessment to monitor future processes to ensure that problems do not arise. The Government noted that the gazettal of the SWMOP and the experience gained from developing the first round of water sharing plans will help to inform the process for future plans.

Assessment

The Council acknowledges that New South Wales deferred the commencement of the water sharing plans to 1 January 2004 to accommodate foreshadowed CoAG work on national water industry arrangements. The national process may alter the approach to some areas of the existing CoAG agreements such as water allocations and entitlements, environmental allocations and trading — all of which are areas covered by the New South Wales water sharing plans.

As a result of the national process, the Council's consideration of this element of the water reform program needs to be delayed, at least until 1 January 2004. The Council proposes to conduct a supplementary assessment in February 2004 of the New South Wales Government's compliance with the CoAG obligation to make appropriate provision of water to the environment for stressed and overallocated rivers. Until then, the Council will work with New South Wales to better understand the basis for and the effects of the environmental allocations in the gazetted water sharing plans. The Council will seek to understand the nature and extent of any socioeconomic trade-offs from recommended environmental flows. In the 2004 NCP assessment, the Council will report all jurisdictions' progress in implementing environmental allocations. Then, in 2005, it will conclude its assessment of jurisdictions' compliance in this area consistent with the timetable established by CoAG.

The Council considered the New South Wales Government's regard for ARMCANZ national principle 9 (that all water uses should be managed in a manner that recognises ecological values) in assessing the State's implementation of integrated catchment management obligations (see section 2.4) and the National Water Quality Management Strategy (see section 2.5).

2.3 Intrastate trading

Assessment issue: Trading arrangements in water allocations or entitlements are to be instituted to maximise water's contribution to national income and welfare, within the social, physical and ecological constraints of catchments. Any restrictions on trading need to be shown to be in the public interest. According to the CoAG timetable for assessment of reform progress by the Council, arrangements to enable intrastate trade are to be assessed in 2003.

In the 2001 NCP assessment, the Council found that the trading provisions in the Water Management Act represent a clear improvement on previous arrangements. The Council identified, however, a number of transitional issues and constraints on trade, including:

- the fact that the new trading arrangements were still to commence, with the water sharing plans and the registry system to be finalised and implemented, and the trading rules to be further developed; and
- the limitation on trade out of some regulated irrigation districts.

New South Wales needs to ensure the limitation on water trade out of regulated irrigation districts is removed or demonstrate that the constraint is in the public interest. New South Wales also needs to ensure trading rules in water sharing plans facilitate trading where this is socially, physically and environmentally sustainable.

Next full assessment: The Council will assess arrangements for water trading in 2004.

Reference: CoAG water reform agreement, clause 5

Significant volumes of water are traded in New South Wales each year. With an embargo on new entitlements in many systems, trading is the primary means for new enterprises to obtain water allocations and for existing water users to expand their activities or improve their security of supply.

The Water Management Act includes the following elements of most relevance to trading.

- Water access licences are separated from land, are divisible and can be transferred permanently or temporarily.[5]
  - In irrigation schemes, the irrigation corporations hold bulk access licences. The corporations provide a share of the water to each of the landholders within the irrigation district. Only the corporations can legally trade entitlements to or from their districts. Some of the corporations limit trade out of their irrigation district.

[5] Basic landholder rights, including stock and domestic rights, are tied to land and are not transferable. Towns are able to buy and sell water entitlements, though sales are restricted to temporary trades of one-year duration.

- The 'share' (or volumetric) component of a licence is separated from the 'extraction' component (which specifies the sections of the water source from which water may be taken). These components may be independently transferred. By separating the share component from the extraction component, water can be traded without requiring complex environmental assessments for approving extraction and use.

- The register of access licences allows third party interests to be registered. The consent of third parties is required before a transaction may proceed.

- Water sharing plans (the bulk of which will commence on 1 January 2004) define the quantity of water available for extraction under access licences and for use by the environment in individual water sources.

- An application to trade must comply with the provisions of the Act and any local transfer rules established in the water sharing plans for the relevant water sources.

Trading to date

During 2001-02, around 710 gigalitres of water was traded in regulated river systems in New South Wales (table 2.1). Trading is concentrated in the irrigation areas in southern New South Wales. The Murray and Murrumbidgee river systems account for almost 60 per cent of total trade, with the Darling and Lachlan systems accounting for a further 15 per cent. Pending the commencement of the water sharing plans, the Council understands that only limited trading in unregulated river and groundwater systems has occurred.

In the regulated river systems, more than 95 per cent of the volume of water traded in 2001-02 occurred as temporary trade; permanent trade accounted for only 33 gigalitres. Most trading is in general (low) security licences. In volume terms, general security licences accounted for around three-quarters of temporary trade and 95 per cent of permanent trade in 2001-02.

Table 2.1: Water trading in New South Wales, 2001-02

River system	*Temporary transfers (no.)*	*Volume of temporary transfers (ML)*	*Permanent transfers (no.)*	*Volume of permanent transfers (ML)*	*Volume of total transfers (ML)*
Barwon	1	60			60
Bega			2	60	60
Darling	115	37 157	2	200	37 357
Dumaresq	18	3 227			3 227
Gwydir	120	53 337			53 337
Hunter	11	1 633	64	7 190	8 823
Lachlan	444	67 871	17	4 832	72 703
Macintyre	41	22 879			22 879
Macquarie	223	43 978	21	10 499	54 477
Murray	721	175 369	22	4 072	179 441
Murrumbidgee	691	220 723	16	5 361	226 084
Namoi	186	52 462	4	474	52 936
Total	2 571	678 696	148	32 688	711 384

Source: Government of New South Wales 2003a

While New South Wales has not provided more recent information, trade in the late 1990s represented approximately 10 per cent of total water entitlements. The majority of trade in New South Wales was within the local region or valley: around one-third within the boundaries of the irrigation corporations and a further half within the valley. Intervalley and interstate trade accounted for only 11 per cent and 4 per cent respectively of total trade in water in 1997-98.

Changes in the regulatory environment since 2001

As discussed in section 2.2, New South Wales gazetted 35 water sharing plans in early 2003, applying to areas covering 80 per cent of the State's water. New South Wales intended that these plans commence on 1 July 2003 but deferred commencement until 1 January 2004. Until the new arrangements commence, the licensing and trading provisions of the Water Act remain in effect.

Access licence dealing principles

To provide a basis for the trading rules in water sharing plans, in December 2002 New South Wales gazetted a Statewide Access Licence Dealing Principles Order under the Water Management Act. Access licence dealings include:

- a change to the ownership of an access licence (referred to as a 'transfer');
- a change in the category of an access licence (a 'conversion', such as from general security to high security);
- the separation ('subdivision') or amalgamation ('consolidation') of access licences;
- the movement of the share component or extraction component from one access licence to another (an 'assignment');
- the movement of water allocations from the account of one access licence to another; and
- a change in the location at which water allocations credited to the access licence may be extracted.

Under the Access Licence Dealing Principles Order, the objective of access licence dealings is to:

> *… help to facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:*
>
> *(a) allowing water to move from lower to higher value uses, and*
>
> *(b) allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and*
>
> *(c) allowing greater flexibility to access licence holders.*

The general principles applying to access licence dealings are summarised in box 2.1.

Box 2.1: General principles for access licence dealings in New South Wales

Dealings should:

- not adversely affect environmental water and water-dependent ecosystems;
- be consistent with strategies to maintain or enhance water quality;
- in unregulated rivers, not increase commitments to take water from areas of high conservation value;
- in unregulated river and groundwater sources, not increase commitments to take water above sustainable levels;
- in regulated rivers, not increase daily demand at locations and times where demand exceeds delivery capacity;

- in regulated rivers, not increase commitments to take water in lower river or effluent systems where this would result in flow for water delivery exceeding 80 per cent of channel capacity for more than 10 per cent of days;
- not adversely affect geographical and other features of Indigenous significance or of major cultural, heritage or spiritual significance; and
- not adversely affect the exercise of basic landholder rights and have no more than a minimal effect on the taking of water from an approved water supply work.

Source: Access Licence Dealing Principles Order 2002

Apart from these general principles, various principles apply for specific types of access licence dealing.

- Most access licence dealings are prohibited if there is an outstanding debt under the Act in respect of the licence or if the licence has been suspended.

- Access licence dealing rules in a water sharing plan are not permitted to regulate or prohibit intrastate transfers of access licences (that is, the transfer of the licence from one person to another), or the subdivision or consolidation of access licences.

- Access licence dealing rules in a water sharing plan may regulate or prohibit other access licence dealings (that is, apart from intrastate transfers, or subdivisions or consolidations) if doing so in a manner consistent with the general principles.

- Dealings involving a change of water source are prohibited where the movement is from an unregulated to a regulated water source (but not vice versa), or from a groundwater source to a regulated river or unregulated river (or vice versa), and no water allocations remaining in the water allocation account of the cancelled licence may be credited to the new licence.

- Interstate dealings must be consistent with the relevant interstate agreement.

In developing the trading rules that will apply to each water source, water management committees have tailored the Statewide access licence dealing principles to account for the level of stress on the water source and operational constraints. Many of the water sharing plans nominate zones in which water dealings are restricted. New South Wales advised that these restrictions are for environmental reasons or because there is limited supply capacity. It also advised, however, that water management committees were required when developing the water sharing plans to assess the socioeconomic impacts, including the impacts of retaining or removing trading restrictions. New South Wales stated:

> *A key objective of the Government has been to remove as many restrictions on trade as possible, and the final plans reflect a freeing up of the trading environment. In the Murrumbidgee plan, for example, many of the previous restrictions and penalties on trading, such as the loss of carry-over water, have been removed.* (Government of New South Wales 2003a, p. 10)

Examples of restrictions on trading in three of the gazetted water sharing plans (one regulated river plan, one unregulated river plan and one groundwater plan) are shown in box 2.2.

Box 2.2: Examples of trading restrictions in gazetted water sharing plans in New South Wales

Lachlan River regulated water source

- Any dealing that would increase the total volume of share components of access licences allowed to take water from the Lachlan River downstream of Booligal is prohibited.
- The trading of access licences or share components between upstream of Lake Cargelligo and downstream of Lake Cargelligo is limited until a full review is completed.
- The trading of access licences from the Lachlan River regulated water source to the Lachlan River effluent creeks or Willandra Creek downstream of Willandra Homestead is prohibited.
- The assignment of water allocations from a Lachlan River regulated water access licence to an access licence in another water source (such as the tributaries) is prohibited.
- Access licences in the Lachlan River regulated water source may not be transferred to another State.

Kangaroo River unregulated water source

- Individual daily extraction limits of unregulated river access licences can only be traded within the Kangaroo River water source.
- There is to be no net increase in the share component and extraction component in the escarpment zone to more than specified levels.

Upper and Lower Namoi groundwater sources

There are prohibitions on dealings:

- to or from water sources outside the plan area;
- if the total share component or water allocated would exceed 600 megalitres per year per square kilometre;
- if adverse local impacts would result;
- of water allocations from the Quirindi local water utility;
- of supplementary water access licences or allocations;
- of aquifer access licences and water allocations into or out of the Lower Namoi Groundwater Source;
- of aquifer access licences and water allocations into any Upper Namoi groundwater source, with the exception of zone 10; and
- if the total share component of all access licences and the total water allocations in zone 10 would exceed 70 per cent of its recharge.

Trade out of irrigation districts

In both the 2001 and 2002 NCP assessments, the Council identified restrictions on trade out of irrigation districts by some irrigation corporations as a significant impediment to the expansion of water trading both within New South Wales and interstate. These restrictions have not changed since the 2002 NCP assessment. New South Wales advised the Council of the following developments.

- A recent literature review and a survey of irrigation company managers and staff undertaken by Hassall and Associates found that barriers to water trades imposed by the boards of irrigation companies were typically erected in response to fears of 'stranded assets'. If water entitlements are sold out of the irrigation district, then fewer users are left to meet the ongoing costs of water supply, including the costs of maintaining supply infrastructure. Hassall and Associates concluded that education and persuasion are the Government's major tools to achieve better internal markets and participation in external markets.

- In work for the Murray–Darling Basin Commission, Hassall and Associates analysed options for the irrigation corporations to address the stranded assets problem. The consultancy identified a number of mechanisms, including an exit fee on trades. (For further information on the consultancy, see chapter 10.) New South Wales considered that the irrigation corporations should examine these mechanisms. It also endorsed the consultant's proposed approach of consultation with irrigation area managers and workshops on the options.

New South Wales acknowledged that the irrigation corporations could adopt less restrictive mechanisms in dealing with the stranded asset problem. It is considering options for dealing with this issue as part of ongoing interjurisdictional work on water trading through CoAG and the Murray–Darling Basin Commission.

Submissions

Ms Belinda Wilkes, on behalf of horticultural irrigators in the Murrumbidgee Valley, advised that there are a sizeable number of restrictions on permanent trade in the valley, particularly on the transfer of licences out of irrigation areas. While noting that, in some instances, the restrictions seek to avoid stranded assets, Ms Wilkes considered that the restrictions significantly undermine efficient trade.

Ms Wilkes was also concerned about the trading rules in the water sharing plan for the Murrumbidgee River. In particular, she pointed to the prohibition on the assignment of water allocations from a regulated river (high security) access licence water allocation account for applications received after 1 September in any water year. She commented that this 'restrictive rule bears

no relationship to the ability to physically supply the traded water' (Wilkes 2003, p. 2). Ms Wilkes considered that the rule is anticompetitive and will have a significant influence on the market to the direct benefit of general security irrigators (who are able to undertake temporary sales after the cut-off date).

Discussion

Under the CoAG water reforms, the objective of water trading is to ensure water is used to maximise its contribution to national income and welfare, subject to the social, physical and ecological constraints of catchments.

In previous NCP assessments, the Council found that the water trading provisions in the Water Management Act improve the previous arrangements in New South Wales. The main outstanding trading issues at the time of the 2002 NCP assessment were:

- the fact that the new trading arrangements were still to commence, with the water sharing plans and the registry system to be finalised and implemented, and the trading rules to be further developed; and
- the limitation on trade out of regulated irrigation districts.

While the provisions in the Water Management Act relating to licences and trading, as well as the first round of water sharing plans, are now scheduled not to commence until January 2004, the arrangements should provide an effective framework for future water trading. The water sharing plans will cover around 80 per cent of water use in New South Wales. The water sources accounting for the remaining 20 per cent of water use will continue to be administered under the more restrictive Water Act until New South Wales finalises water sharing plans (or other arrangements) for these areas.

Under the arrangements to apply from 1 January 2004 in areas covered by the first-round plans, water access licences are separated from land, are divisible and can be transferred permanently or temporarily. The water access licence register provides security of title, enabling licences to be borrowed against and invested in. The register also allows third party interests to be registered, with their consent required before a transaction may proceed. While the time taken to process trades has been a problem in the past, New South Wales expects significant improvements under the new arrangements.

Trading mechanisms are already well developed in New South Wales, with trade occurring through formal water exchanges, brokers and private sales. Market information (including on prices) tends to be widely available and readily accessible, particularly through the water exchanges. The water access licence register will also be open to the public. Once finalised, the water sharing plans, including the rules for trading to and from a particular water source, are available on the Internet.

The new arrangements also include measures to ensure water trades do not adversely affect the environment or the rights of other water users. All water transfers must be approved by the Government and be consistent with the water management principles in the Water Management Act, the access licence dealing principles and the trading rules in the relevant water sharing plans.

The water sharing plans finalised to date and the Statewide access licence dealing principles provide greater scope for trading than previously possible (for example, trade will be permitted in unregulated river systems where it was not previously possible). Some constraints remain, however, despite the New South Wales Government's stated objective of removing as many restrictions on trade as possible and despite the statement of objectives in the Access Licence Dealings Principles Order. The access licence dealing principles prohibit, for example, dealings involving a change of water source where the movement is from an unregulated to a regulated water source. In addition, the water sharing plans often nominate zones in which dealings are restricted and, in some cases, impose wider restrictions (for example, access licences for the Lachlan River regulated water source may not be transferred interstate).

The guides to the water sharing plans recently released by New South Wales generally indicate that the rules regulating dealings are required for practical management reasons and to protect the environment and the interests of other access licence holders. The restrictions on trading out of the Lachlan River, for example, are in place to protect the environment of the lower river.

Nevertheless, other rationales also underpin the restrictions on trading in some plans. New South Wales advised that, in relation to one plan, the restriction on dealings involving a change of water source where the movement is from an unregulated to a regulated water source is in place to protect an immature water market (on the unregulated rivers) from a well developed market (on the regulated rivers). This restriction appears likely to constrain the extent to which water is used for its highest value purpose and is, therefore, likely to militate against the achievement of CoAG water reform objectives. New South Wales also indicated that it required water management committees to assess socioeconomic impacts in developing the plans, including the impacts of retaining or removing trading restrictions. As an example, the guide for the Lachlan River regulated water source states that the dealing rules may be required to protect social infrastructure.

The prohibition on trade out of some irrigation districts impedes water trading both within New South Wales and interstate. The prohibition appears to be a response to community concern that trade out of a district may result in adverse outcomes, including: the diminution of local production and regional economies; a reduction in the rate base for local governments; and the loss of economies of scale and potential 'stranding' of irrigation infrastructure. In addition, directors of irrigation corporations have responsibility for the ongoing value of the corporation and therefore want to ensure there are no adverse impacts for their shareholder-customers. The

prohibition significantly limits, however, the capacity to achieve CoAG objectives.

While the ability to vary trading rules rests with the boards of the corporations and their shareholder-customers, the CoAG water agreements place responsibility on the New South Wales Government to facilitate trading in water so that water is used to maximise its contribution to national income and welfare where socially, physically and ecologically sustainable. This qualification does not justify restrictions on trade, unless there is rigorous evidence to demonstrate that the restriction provides a net public benefit: the CoAG agreements are clearly predicated on a presumption of encouraging trading in water. Moreover, the institutional reform obligation to devolve irrigation scheme management envisages that devolution is based on governments establishing appropriate regulatory frameworks within which local management takes place. The Council considers that such frameworks should include the ability for a State Government to require change within the irrigation schemes where CoAG objectives are not being met.

The Council accepts that resolution of this issue should be pursued, at least initially, through consultation and negotiation between the New South Wales Government and the irrigation corporations.

New South Wales advised that it is awaiting the outcome of the Murray–Darling Basin Commission's work on water trading and that resolution will require consultation with the corporations on less restrictive solutions that the corporations could implement. The Murray–Darling Basin Commission's work, which is examining restrictions in the context of interstate trade, may shed light on the feasibility of using less restrictive alternatives to the current prohibition to achieve the objectives of the irrigation corporations. The alternatives being considered include pricing reforms, long-term contracts, exit fees and, as an interim strategy, annual limits on trade (see chapter 10).

Assessment

Consistent with the New South Wales Government's stated objective of removing as many restrictions on trade as possible, the water sharing plans finalised to date and the Statewide access licence dealing principles provide greater scope for trading than previously possible. The Government's decision to defer commencement of the gazetted water sharing plans and the new registry system until January 2004 will delay the commencement of the new water trading rules, with trading occurring in the interim under the Water Act. The Council accepts that the driver for the delay in commencement of the plans was the foreshadowed CoAG consideration of national water industry arrangements.

Although they generally facilitate water trading, some water sharing plans contain restrictions on trading, not all of which appear to be related to a need to protect the environment or to ensure the practical management of trading. Some constraints (for example, the restriction on dealings involving a change

of water source where the movement is from an unregulated to a regulated river) appear to be a response to socioeconomic concerns. New South Wales needs to show a robust net public benefit case for these constraints. The prohibition on trade out of some irrigation districts is a significant constraint on both intrastate and interstate trade, and appears inconsistent with CoAG obligations. New South Wales proposes to consider its approach when the outcome of the Murray–Darling Basin Commission's current work on trading restrictions is available.

The Council is satisfied that New South Wales made sufficient progress against CoAG obligations on water trading for the 2003 NCP assessment. The Council proposes to work with New South Wales during 2003-04 to better understand the rationale for the trading rules and their consistency with CoAG obligations. In addition, given concerns previously with the time taken to approve trades, the Council will expect New South Wales to report for the 2004 NCP assessment on the timeliness of approvals (based on the first three months of operation of the new system). The Council will also expect New South Wales to have substantially resolved the issue of the prohibition on trade out of irrigation districts by the 2004 NCP assessment, accounting for the Murray–Darling Basin Commission's work on trading restrictions. Under the CoAG agreements, the New South Wales Government is ultimately responsible for ensuring the prohibition is removed or demonstrating that it is in the public interest.

2.4 Institutional reform

Structural separation: State Water and service standards for nonmetropolitan urban service providers

Assessment issue: As far as possible, the roles of water resource management, standard setting and regulatory enforcement, and service provision are to be separated institutionally.

In the 2001 NCP assessment, the Council found that there was a need for greater transparency in the relationship between State Water and the Department of Land and Water Conservation (now the Department of Infrastructure, Planning and Natural Resources), given the potential conflicts between service provision and resource regulation. In addition, as New South Wales had decided that independent regulation is not appropriate for smaller local government water service providers, the Council indicated it would look for greater transparency in service standards and reporting for these providers.

New South Wales needs to demonstrate sufficient structural separation between State Water and the department and provide further information on service standards and reporting for smaller local government water service providers.

Next full assessment: The Council will assess institutional reform in 2005 as part of a full assessment across the entire package of water reforms.

Reference: CoAG water reform agreement, clauses 6(c) and 6(d)

State Water provides certain bulk water services in rural New South Wales. At the time of the 2001 NCP assessment, State Water was a ring-fenced business unit within the (former) Department of Land and Water Conservation. The Independent Pricing and Regulatory Tribunal has provided price regulation for State Water since 1995, setting maximum prices for the supply of bulk water. The Council considered, however, that there was a need for greater transparency in the relationship between the (former) Department of Land and Water Conservation and State Water, in relation to potential conflicts between service provision and resource regulation. In the 2002 NCP assessment, the Council reported that New South Wales was proposing to conduct an independent review of the governance structure of State Water.

In the 2001 NCP assessment, the Council noted that New South Wales had decided that independent regulation is not appropriate for smaller local government water supply and sewerage service providers. As a result, the Council considered that it was difficult for New South Wales to achieve full institutional separation (particularly between service provision and standard setting) for these providers. The Council indicated that it would look for transparency in service standards and reporting to place pressure on local governments to improve their performance.

Reform progress

Following the State election in March 2003, the New South Wales Government transferred responsibility for State Water to the Ministry of Energy and Utilities. The transfer followed consultation with water users. New South Wales considered that the transfer provides a clear distinction between the manager of built assets and the natural resource regulator, and enables greater transparency in the determination of the capital costs and natural resource management costs included in pricing.

In relation to service standards for smaller local government water service providers, New South Wales clarified that it considered that its annual performance report enables customers to compare standards of service across all of the providers (DLWC 2002b). This report is publicly available on the department's web site. Under the Local Government Act, local water service providers are also required each year to prepare and exhibit a management plan for their activities covering at least the next three years. The management plans must include proposed capital works projects and asset replacement programs, as well as the proposed charges and budget for the upcoming year. In addition, under New South Wales's best practice management guidelines issued in February 2003, local water service providers must prepare 30-year strategic business plans. Customers have access to the State Ombudsman if a complaint (including about the standard of service) is not resolved by the relevant water service provider.

Submissions

Submissions from Macquarie River Food and Fibre, Ms Belinda Wilkes (on behalf of horticultural irrigators in the Murrumbidgee Valley) and the NSW Irrigators' Council raised concerns regarding the extent of separation between State Water and the former Department of Land and Water Conservation. Macquarie River Food and Fibre also indicated concerns regarding the new departmental arrangements:

> … *we are unsure whether the current arrangements deliver efficient, transparent, accountable and independent service delivery. The latest 'separation' of State Water from the old DLWC may not be the most efficient means of achieving institutional separation, despite the independence associated with 'physical' separation.* (MRFF 2003, p. 3)

Discussion and assessment

The transfer of responsibility for State Water to the Ministry of Energy and Utilities separates commercial service provision by State Water from the natural resource regulation role of the new Department of Planning, Infrastructure and Natural Resources. The effectiveness of the new arrangements will become clearer over time.

Given the further clarification provided by New South Wales, as independent regulation is not cost-effective for smaller local government water service providers, the Council considers that there is adequate transparency in standards of service and reporting to encourage local governments to improve their performance.

The Council considers that New South Wales has satisfactorily addressed its structural separation obligations for the 2003 NCP assessment.

Integrated catchment management

Assessment issue: New South Wales is to:

- develop administrative arrangements and decision-making processes to ensure an integrated approach to natural resource management;
- adopt 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; and
- support the consideration of establishing land care practices that protect areas of rivers that have a high environmental value or are sensitive for other reasons.

In the 2001 NCP assessment, the Council was satisfied that New South Wales was meeting its 2001 obligations on integrated catchment management.

Next full assessment: The Council will conduct a full assessment across the entire package of water reforms in 2005.

Reference: CoAG water reform agreement, clauses 6(a), 6(b), 8(b) and 8(c)

In 2003, the New South Wales Government reorganised the responsibilities and administrative arrangements for government agencies involved in the management of natural resources. In particular, it established the Department of Infrastructure, Planning and Natural Resources to improve the coordination of natural resource management by drawing together policy functions spread across several agencies. The Government also indicated that it proposes to establish a Natural Resources Commission to integrate some functions of existing resource assessment and advisory bodies (Healthy Rivers Commission 2003b).

The State Catchment Management Coordinating Committee is the peak body for integrated catchment management in New South Wales. The committee, which advises the Minister on catchment issues, comprises representatives of rural interests, the Local Government and Shires Association, environmental interests, the catchment management community and Government agencies.

The State's catchment management framework is based on the development and implementation of 10-year integrated catchment management plans ('catchment blueprints') by catchment management boards. This framework was established in 2000 under the *Catchment Management Act 1989* and the Catchment Management Regulation 1999. It replaced arrangements whereby

43 catchment management committees and five regional catchment committees developed catchment strategies. The new arrangements are designed to provide a more integrated approach and to more effectively harness community, State and national resources.

The State's 19 catchment management boards (and one catchment management trust):[6]

- identify opportunities, problems and threats associated with the use of natural resources;
- identify objectives and targets for the management of natural resources;
- develop management options, strategies and actions to address identified objectives and targets.
- help develop greater community understanding of the issues identified and action required to support rural production and protect the environment; and
- initiate proposals for projects to achieve these functions, and assess projects submitted for funding under Commonwealth and State natural resource management grant programs having regard to targets identified by the board.

The Governor appoints the boards on the recommendation of the Minister for Natural Resources. Membership, which is specified in the Act, comprises community representatives, industry, and State and local government, and draws on expertise in nature conservation, primary production, natural resource use and Aboriginal affairs.

Catchment blueprints developed by the boards are advisory community-Government plans to guide the management of natural resources within particular catchments for a 10-year period. New South Wales provided a support package to help catchment management boards develop their blueprints. Government agencies also provided training in corporate governance and cross-cultural awareness.

The boards drew on the work of the former catchment management committees and regional catchment committees in developing their catchment blueprints. They also developed the blueprints in accord with national frameworks, including the accreditation requirements of the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust extension.[7] New South Wales signed bilateral agreements with the

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6 See footnote 8.

7 The Commonwealth Government extended the National Heritage Trust to 2006-07 in the May 2001 budget. The Natural Resource Management Ministerial Council and State, Territory and Commonwealth Ministers endorsed the implementation

Commonwealth Government on the national action plan in May 2002 and the Natural Heritage Trust extension in June 2003. Under the national frameworks, New South Wales will submit catchment blueprints as accredited plans for investment under the plan and trust.

Catchment blueprints establish specific and measurable catchment targets covering biodiversity, water quality and flow, salinity, riverine ecosystems, soil health and native vegetation. They also include management targets and prioritised management actions to achieve targets (see box 2.3). This approach is consistent with target-setting frameworks under the national action plan, as reflected in the National Framework for Natural Resource Management Standards and Targets 2002.

The New South Wales Government endorsed the State's 21 catchment blueprints[8] in late 2002, following public consultation.[9] While the boards commenced implementation of the blueprints in 2002-03, some management actions at the catchment level require funding under the national action plan and Natural Heritage Trust extension, which had not been provided at the date of the 2003 NCP assessment. The boards are also developing blueprint investment strategies that will provide further detail on management actions, address monitoring, evaluation and reporting issues, and identify funds required for implementation. Government agencies are providing staff resources and information to help the boards develop investment strategies.

The boards are required to periodically review the effectiveness of their blueprints and submit annual reports to the Minister on progress with implementation. The Minister will appoint an independent audit panel to report on progress at least once every five years. Audit reports will be made public.

framework in October 2002. A significant focus of the framework is on measures to improve water quality.

8 There are 19 catchment management boards and one catchment management trust — the Hunter Catchment Management Trust acts as the de facto board for the Hunter region. There are 21 catchment blueprints because two blueprints were developed for the Hawkesbury-Nepean Catchment (one for the upper part of the catchment and one for the lower part).

9 The blueprints are public documents. The Southern Sydney catchment blueprint will be released shortly.

Box 2.3: Catchment blueprint targets in New South Wales

Catchment blueprints contain three levels of targets.

A *catchment target* is a specific and measurable indicator of catchment health at a specified point in time. An example of a catchment target is:

- salinity levels in the river at the outflow of the catchment less than 800 EC,[10] exceeded no more than 10 per cent of the time by 2010.

A *management target* is the level of action needed to achieve a catchment target within a specified time. Management targets needed to meet the above catchment target may include:

- salt interception scheme to reduce in-stream salinity by 60 EC by 2010 (short-term effect on salinity);
- dilution flows to reduce salinity by 30 EC by 2010 (short-term effect on salinity);
- no more than 15 per cent loss of existing native vegetation in recharge areas at July 2010 (long-term effect on salinity); and
- remedial works (or land retired) established in all critical discharge areas by 2005 (medium-term effects on salinity).

Prioritised *management actions* state what is to be done, where, by whom and by what cost-sharing arrangements, in pursuing management targets. In the above example they could include management agreements to help maintain native vegetation, major works programs and stewardship payments to retire land under certain conditions.

Source: Government of New South Wales 2003a

The New South Wales catchment management framework recognises interrelationships between water quantity and water quality management. The catchment blueprint sets overarching natural resource priorities for a catchment as a whole, consistent with national and statewide policy. Where appropriate, blueprints set catchment targets for water quality and river flow, such that water use is managed to deliver outcomes consistent with the interim New South Wales environmental objectives[11] (see, for example, Murrumbidgee Catchment Management Board 2003).

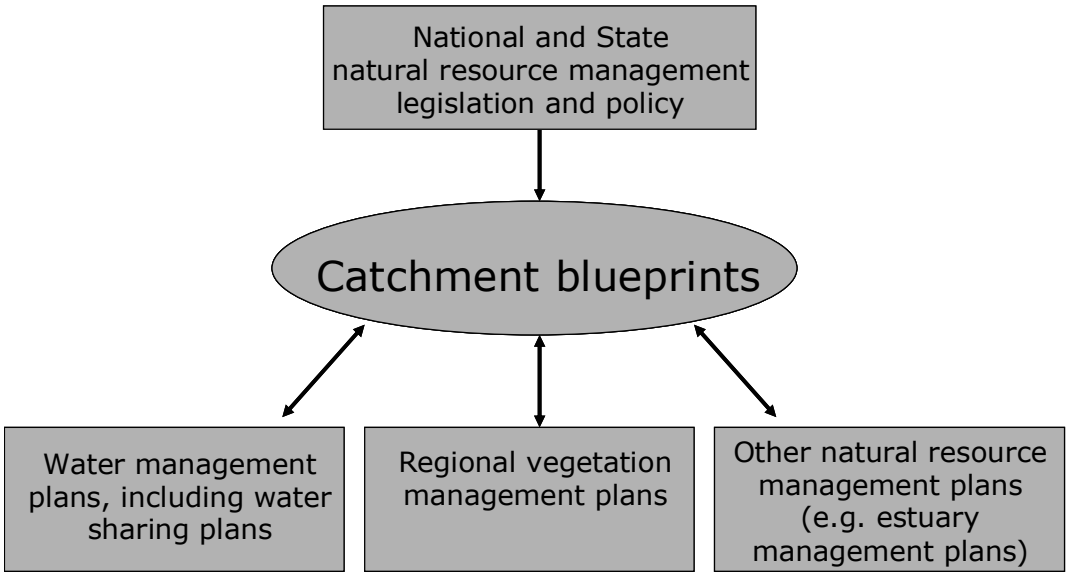
Similarly, water management plans (including water sharing plans) and regional vegetation management plans must account for any relevant catchment blueprints. In particular, the plans must address salinity and other targets in the blueprints, and demonstrate how their strategies contribute to meeting those targets (figure 2.1).

New South Wales indicated that future land-use plans will be required to account for natural resource management plans and help meet the objectives and targets set out in these plans (DLWC 2002a, p. 5).

[10] Electrical conductivity (EC) is a widely used method of measuring the salinity of water. It is not a direct measure of salinity, but a measure of the ability of water to carry an electrical current. The EC level increases as the presence of salt increases (Border Rivers Catchment Management Board 2003, p. 27).

[11] The Council considers water quality objectives in the context of the National Water Quality Management Strategy.

Figure 2.1: Catchment blueprints in New South Wales



Source: Department of Land and Water Conservation 2002a

Salinity

Salinity is a major issue in New South Wales and relates to drainage from irrigation, saline groundwater and river salinity. The National Land and Water Resources Audit estimated that dryland salinity in New South Wales affects 180 000 hectares, which may grow to 1 300 000 hectares by 2050 (NLWRA 2001). The Murray–Darling Basin Commission has set targets for salinity levels in each major river, which are expected to affect land and water management practices for western areas of New South Wales.

The NSW Salinity Strategy 2000 established a Statewide framework to set:

- salinity targets for acceptable salinity conditions by 2010; and
- management actions to achieve those targets.

The Government set interim salinity targets in August 2000. Catchment management boards then reviewed the targets and developed salinity management targets to include in their catchment blueprints (see box 2.4).

An end-of-valley salinity target has been agreed for all nine major inland rivers in New South Wales. These targets are generally compatible and comparable with salinity targets for the Murray–Darling Basin, and have been derived on a consistent basis.[12] The Murray Catchment Management Board is developing salinity targets for the River Murray.

[12] New South Wales has reported some minor technical differences in approach (Government of New South Wales 2000, p. 16).

The NSW Salinity Strategy has been developed for consistency with the national action plan, under which New South Wales and the Commonwealth Government will invest A$396 million in salinity and water quality initiatives between 2002 and 2007 (Government of New South Wales 2002, p. 4).

Box 2.4: The Border Rivers catchment blueprint

The Border Rivers catchment blueprint contains the following salinity targets to be achieved by 2012.

- The area of land where the groundwater is within 2 metres of the surface will not exceed 16 800 hectares.
- Median salinity levels in the Macintyre River at Mungindi should not exceed 230µs/cm EC and salinity levels should not exceed 630µs/cm EC more than 20 per cent of the time.
- The median salt loads should remain constant at 68 000 tonnes per year and the salt load should not exceed 171 000 tonnes per year more than 20 per cent of the time.

To meet the salinity targets, the blueprint proposes to:

- maintain appropriate deep-rooted perennial vegetation in recharge areas (which are to be quantified);
- establish at least 15 000 hectares of appropriate deep-rooted perennial vegetation in identified recharge areas;
- use engineering solutions where appropriate to reduce the salt load expressed from significant point sources (such as high flow artesian bores or identified effluent treatment plants) by 7500 tonnes per year;
- manage 1400 hectares of saline discharge areas; and
- ensure no net increase in salt loads as a result of new developments that require a development application.

Source: Border Rivers Catchment Management Board 2003; Government of New South Wales 2002

The Healthy Rivers Commission

The New South Wales Government established the Healthy Rivers Commission in 1996 with the aims of achieving healthy rivers and addressing river health problems, many of which have existed for decades. The commission conducts public inquiries into selected river systems and makes recommendations to the Government on long-term management strategies.

The commission has completed inquiries into nine river systems, with one inquiry under way. The Government has announced a decision on seven of the completed reports. Since the Council's 2001 NCP assessment, the commission released final reports on the Georges River–Botany Bay in November 2001, the Hunter River in August 2002 and North Coast rivers in May 2003 (Healthy Rivers Commission 2003b).

The Government responds to the commission's recommendations via a statement of intent and a public commitment that Government agencies will deliver outcomes in specific timeframes. The Healthy Rivers Commission audits the statement of intent actions after two years, and the water subcommittee of New South Wales Cabinet considers the audit report.

As part of its review of draft catchment blueprints in 2002, the Government provided comments to the catchment boards to ensure that the blueprints reflected any recommendations of the Healthy Rivers Commission, as well as the thrust of recommendations that had not yet been endorsed by the Government.

Land care

Some 1650 Landcare groups in New South Wales undertake activities that include on-ground works, research, monitoring, education and community awareness (Government of New South Wales 2002, p. 12). The Landcare Working Group makes key recommendations about the direction of land care. It is made up of community Landcare representatives from across the State, representatives of State Government agencies and nongovernment organisations, and the State Landcare Coordinator.

New South Wales supports Landcare groups through joint funding with the Commonwealth Government for Landcare coordinators, along with administrative, promotional and financial support. Regional Landcare coordinators help groups develop networks and connect their projects with regional and catchment plans (Government of New South Wales 2001, p. 8).

While there is no designated Landcare position on the catchment boards, most have several members who are involved in Landcare. The boards consulted widely during the various stages of blueprint development, including with the Landcare community. The boards recognise community capacity building as a key component of blueprint implementation and some of the blueprint management actions will involve Landcare groups. Many Landcare and Rivercare groups already work on catchment issues, including streambank erosion and river water quality.

Submissions

The NSW Irrigators' Council, Macquarie River Food and Fibre, and the Environmental Defender's Office criticised aspects of the Government's approach to integrated catchment management. Their key criticisms are that:

- the various strands of natural resource management are not well coordinated;
- in some instances, priorities under the national action plan appear to take precedence over priorities in catchment blueprints; and
- some elements of the administrative framework do not provide for adequate representation of stakeholders.

On the issue of policy coordination, the NSW Irrigators' Council stated:

> *Catchment management in NSW has been ad-hoc, and opportunistic. There is no clear relationship between the catchment blueprints and resource specific management plans, such as water sharing plans. Indeed, some Regional Vegetation Management Plans and the major Water Sharing Plans were finalised prior to the finalisation of catchment blueprints. Furthermore, there is no linkage (statutory or otherwise) between the catchment blueprints and urban and development planning processes.* (NSW Irrigators' Council 2003, p. 6)

Macquarie River Food and Fibre said:

> *There is no explicit working relationship ... between vegetation, river, groundwater and catchment plans…* [I]*ntegration is virtually non-existent at present, apart from at the superficial 'target-setting' level.* (MRFF 2003, p. 9)

The NSW Irrigators' Council also claimed that:

> *… there is no clear legislative relationship between natural resource management and regional development plans. When asked to clarify the legislative hierarchy of natural resource management legislation (such as the Water Management Act, Catchment Management Act, Fisheries Management Act and the Threatened Species Conservation Act), then Minister Aquilina simply responded that 'each of the natural resource Acts are intended to complement others'.* (NSW Irrigators' Council 2003, p. 7)

The Environmental Defender's Office stated:

> *Catchment blueprints have … failed to provide any consistent or meaningful strategy to integrate the management of water and vegetation and issues relevant thereto.* (EDO 2003, p. 2)

It also said that:

> *The Wentworth Group Report to Premier Carr noted that the current catchment plans do not integrate state environmental standards into practical rules which apply across catchments …*
>
> *… The* [Environmental Defender's Office] *submits that one of the major flaws in the current process of catchment management is the fragmented nature of natural resource committees dealing with water, native vegetation and catchments as a whole … The Catchment Management Act 1989 … does not set a framework for the matters that catchment boards are to address when preparing catchment plans. Accordingly, the content of the plans produced to date varies widely. Furthermore, water sharing plans and native vegetation plans which are intended to give effect to catchment priorities have been finalised prior to, and often without regard to, Catchment Blueprints.* (EDO 2003, p. 12)

Regarding the relationship between the national action plan and catchment management, the NSW Irrigators' Council said:

> *From the perspective of NSW Irrigators' Council, the imperative for the preparation of the blueprints has not been integrated catchment management but on meeting requirements demanded by the Commonwealth Government for funding under programs such as the National Action Plan for Salinity and Water Quality …*
>
> *In September 2002, $5.6 million over 2 years was directed to priority actions in the 9 targeted catchments, as well as specific activities for the National Parks and Wildlife Service, State Forests and NSW Agriculture. Of this $5.6 million these agencies directly received $1.9 million. Interestingly, the priority actions that received first round funding did not necessarily align with the top order priorities identified in the catchment blueprints.* (NSW Irrigators' Council 2003, pp. 6 and 8)

Macquarie River Food and Fibre raised similar concerns. It stated:

> *It is concerning that the* [national action plan] *funding process is structured so as to vest power and funds through the State Government rather than going directly to catchment bodies. Catchment Management Boards have not been given skills, structure, power, resources and accountability to make investment decisions. There is no relationship between the Catchment Blueprint targets and government funding.* (MRFF 2003, p. 9)

On the issue of stakeholder representation, the NSW Irrigators' Council argued that the State Catchment Management Coordinating Committee, the overarching coordinating body for catchment management, lacked a sufficiently broad base. The council said:

> *The* [committee] *is made up of 20 members, of which at least 12 are bureaucrats nominated by relevant Ministers. Only 2 of the 20 must be landholders, although there is no requirement for the Minister to accept nominations from peak bodies. Water users are not represented directly on the Committee. Other members of the Committee include representatives from Coastal, Urban and Inland Catchment Management Boards, and a person with an interest in the environment. Indigenous people have no clearly identified statutory position on the Committee.* (NSW Irrigators' Council 2003, pp. 6–7)

The NSW Irrigators' Council (2003, p. 7) also argued that the development of catchment blueprints was 'highly bureaucratic, with (Government) agencies making up considerable numbers on boards.'

Some criticisms raised in submissions to the 2003 NCP assessment reflect the findings of the Wentworth Group Report (Wentworth Group 2003), commissioned by the New South Wales Premier in 2002. The report considered that the regional approach to catchment management, as set out

in the national action plan, had not been effectively implemented in New South Wales. Instead, a more centralised approach had been adopted, which the Wentworth Group argued had not been successful. According to the report:

> *A central reason for the failure of the existing arrangements to produce outcomes is the failure to set practical outcome based standards and to develop guidelines on how to interpret these standards at the catchment level.* (Wentworth Group 2003, p. 12)

The report considered that arrangements could be improved by replacing the current State Catchment Management Coordinating Committee (which the report argued is essentially an interdepartmental committee) with an expert-based, natural resource management commission. The commission should report directly to the Minister on a range of matters, including: Statewide standards and targets (for native vegetation, water quality, salinity, biodiversity and soil conservation); the accreditation of catchment strategies against these standards and targets; and the funding priorities for implementing catchment strategies. The report also advocated a shift towards greater regionalisation in the administration of catchment management. The New South Wales Premier announced in March 2003 that the Government welcomed the Wentworth Group Report and many of its recommendations, and would allocate A$120 million of funding over four years (Carr 2003).

Discussion

The Council found in 2001 that New South Wales was devoting considerable resources to integrated catchment management and meeting its NCP commitments in this area. The principal achievement since 2001 has been the development and Government endorsement of 21 catchment blueprints covering the whole of New South Wales. The blueprints cover water quality and water quantity issues and set a hierarchy of targets that reflect approaches under national and State guidelines. The blueprints incorporate salinity targets and management actions, and dovetail with arrangements under the national action plan. The next stage of reform, which is under way, is the development of accredited investment strategies to implement the catchment blueprints.

Other developments since 2001 include:

- refinements to the administrative framework in 2003 to improve coordination of natural resource management;
- bilateral agreements between New South Wales and the Commonwealth Government on the National Action Plan for Salinity and Water Quality and Natural Heritage Trust extension;
- ongoing work by the Healthy Rivers Commission; and

- the Wentworth Group Report into land clearing and catchment-related issues.

The 2002 supplementary NCP assessment of water reform in New South Wales (NCC 2003b) considered the Government's actions on providing water for environmental purposes to stressed and overallocated river systems (see section 1.4). In the supplementary assessment, New South Wales advised that the catchment blueprint process and the water quality objectives in place for each major river system are significant mechanisms for managing water use to recognise ecological values. The Government considered that these mechanisms satisfy its obligation to manage all water uses in a manner that recognises ecological values (principle 9 of the ARMCANZ/ANZECC National Principles for the Provision of Water for Ecosystems).

There is evidence in the catchment blueprints that New South Wales has considered water use issues, including the relationships between water use and ecological values. The Murrumbidgee catchment blueprint, for example, sets a catchment target for water quality and flow, supported by management targets and prioritised management actions. The supporting documentation includes the National Water Quality Management Strategy (NWQMS), interim State environmental objectives for the Murrumbidgee River and Lake George catchments,[13] and the State Water Management Outcomes Plan. The broad catchment target for water quality and flow for the Murrumbidgee Catchment as a whole is as follows:

> *By 2012, in the Murrumbidgee River and its main tributaries, suspended sediment levels will be reduced so that they meet the interim NSW Water Quality Objectives. Flows and water extractions will be managed to maintain or improve river health consistent with the River Flow Objectives (RFOs) and the Murray–Darling Basin Ministerial Council Cap.* (Murrumbidgee Catchment Management Board 2003, p. 22)

Several submissions commented adversely on the coordination of natural resource management, the representation of stakeholders, and the role of the national action plan in catchment management priorities. The Wentworth Group Report suggested refinements to the administrative framework and changes to stakeholder representation arrangements, including on the State Catchment Management Coordinating Committee.

New South Wales recognises the need for improved coordination, and made changes to the administrative framework for natural resource management in 2003. In particular, the Government established the Department of Infrastructure, Planning and Natural Resources to deliver integrated infrastructure, land-use and natural resources management. New South Wales advised that it will implement additional institutional, legislative and

[13] New South Wales established interim environmental objectives for all river systems in 1999. See section 2.5 on 'NWQMS'.

policy reforms once the Sinclair review on Native Vegetation Reform Implementation[14] and the Kibble review of PlanFIRST[15] have reported.

The State's integrated catchment management arrangements continue to be developed in the context of the national action plan and the Natural Heritage Trust extension. This approach is consistent with New South Wales' NCP obligations to implement integrated catchment management. Moreover, the natural resource management framework in New South Wales appears to facilitate consideration of, and support for, land care practices to protect rivers with high environmental values.

Assessment

The Council considers that New South Wales made satisfactory progress for the 2003 NCP assessment against its integrated catchment management obligations. In particular, New South Wales:

- implemented administrative arrangements and decision-making processes to ensure an integrated approach to natural resource management;
- adopted an integrated catchment approach to water resource management and set in place arrangements to consult with local government and the wider community in individual catchments; and
- recognised the need to continue to improve the administrative framework for natural resource management in the State.

As part of its full assessment of the entire water reform package in 2005, the Council will consider:

- progress by New South Wales in implementing catchment blueprints, including accreditation and implementation of blueprint investment strategies; and
- the Government's policy response to the Wentworth Group report.

[14] The Government appointed the review in 2003 to consider implementation of the Wentworth Group Report.

[15] PlanFIRST is a Government initiative to modernise the State's plan making system, and focuses on a holistic approach that integrates economic, social and environmental issues. The Kibble review was set up following the establishment of the Department of Infrastructure, Planning and Natural Resources in 2003.

2.5 National Water Quality Management Strategy

Assessment issue: New South Wales is to demonstrate a high level of commitment to the ongoing implementation of the objectives of the National Water Quality Management Strategy (NWQMS), including action (through market-based and regulatory measures, water quality monitoring, catchment management policies, town wastewater and sewage disposal, and community consultation and awareness) to achieve the agreed objectives.

In the 2001 NCP assessment, the Council was satisfied that New South Wales was meeting its 2001 obligations on NWQMS implementation.

Next full assessment: The Council will conduct a full assessment across the entire package of water reforms in 2005.

Reference: CoAG water reform agreement, clauses 8(b) and 8(d)

The New South Wales Government is implementing the NWQMS through a range of programs using market-based instruments, regulatory controls, water quality monitoring and catchment management policies.

Water quality objectives

The New South Wales Government approved interim environmental objectives for water quality and river flow for all State rivers and estuaries in 1999. The interim objectives remain in place until the Healthy Rivers Commission develops longer term environmental objectives for particular catchments through independent inquiries undertaken for each catchment. In undertaking its inquiries, the commission has regard to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (NWQMS paper no. 4). Its goal, however, is to develop environmental objectives for the whole ecosystem, rather than confining its approach to water quality and river flow objectives (Healthy Rivers Commission 2003b, p. 38). The objectives developed by the commission are intended to assist catchment management, including the development of water sharing arrangements.

In 2002, the Environment Protection Authority released a consultation paper setting out proposed marine water quality objectives for New South Wales coastal waters (EPA 2002). Once finalised, environmental objectives will be in place for all State waters. New South Wales draws on the methods in NWQMS paper no. 4 to:

- identify the environmental values of water bodies to be protected, for example, aquatic ecosystems and recreational uses; and
- establish water quality objectives, or management goals to help ensure that nominated values are protected.

New South Wales assesses the achievement of water quality objectives by monitoring water quality indicators. The State uses indicators and associated numerical criteria drawn from the Australian Guidelines for Water Quality Monitoring and Reporting 2000 (NWQMS paper no. 7). The numerical criteria are termed 'trigger values' — when exceeded, they signal the need for management action.

The water quality objectives are intended to assist catchment and water management planning by identifying local pressures on water quality and setting benchmarks to assess the effectiveness of management actions. The objectives provide key water quality indicators that can be monitored over time.

In turn, the catchment blueprints are a key mechanism for achieving catchment and Statewide water quality objectives. The blueprints establish targets for vegetation management, which will have a direct bearing on water quality outcomes. Some blueprints establish specific targets for managing salinity.

Government regulation

The enhancement of water quality is a key objective of the *Water Management Act 2000*. The Act integrates and consolidates water legislation covering all water sources in the State. Some provisions account for water quality considerations. In particular, the Act addresses water quality issues through:

- the State Water Management Outcomes Plan; and
- water sharing plans.

The State Water Management Outcomes Plan

The State Water Management Outcomes Plan sets the overarching policy context, targets and strategic outcomes for the development, conservation, management and control of the State's water sources. The plan was gazetted in December 2002 and has effect for five years, after which it will be reviewed and updated.

The plan explicitly provides for the protection and enhancement of the environmental services of aquatic ecosystems, while delivering a framework for using water to meet human needs. It provides direction for management plans addressing water sharing, water use, floodplain management, controlled activities and aquifer interference, and environmental protection. The plan sets long-term outcomes and five-year management targets for water management. Some 27 of its 38 targets address NWQMS requirements.

These outcomes and targets span regulated rivers, unregulated rivers, groundwater, estuarine and coastal water sources.

The Act requires the plan to be consistent with interim environmental objectives for water quality and river flow objectives (established in 1999), as well as longer term objectives set by the Healthy Rivers Commission (see above). The Act also requires the interim objectives to explicitly address future water resource management and actions.

Section 9 of the Act requires all government agency functions exercised under the Act to be in accordance with the State Water Management Outcomes Plan. Licences and approvals, for example, must not detract from the achievement of the plan's outcomes and targets.

Water sharing plans

Water sharing plans under the Water Management Act have been prepared for 80 per cent of the State's surface and groundwater extraction (totalling 35 water sharing plans including 10 for groundwater sources). Although the principal focus of these plans is on the quantity allocated for extractive uses and the environment, the plans also address water quality through:

- maintaining minimum river flows;
- setting commence-to-pump levels in unregulated rivers and environmental flows in regulated rivers, so as to maintain flow and oxygenation, maintain salinity at acceptable levels and prevent the accumulation of nutrients and pollution in stagnant pools;
- providing allowances for the prevention of blue-green algal blooms; and
- providing contingency allowances for wetland and floodplain inundation.

The Act also provides the legislative framework for implementing policies to protect groundwater-dependent ecosystems. Water sharing plans for groundwater sources contain provisions to protect water quality.

- Local impacts are managed via restrictions on access if that is causing a decline in water quality. Falls in water quality are deemed unacceptable if extraction is likely to reduce the water quality to a lower beneficial use class. The use classes are based on NWQMS paper no. 4 and the National Health and Medical Council's Raw Water for Drinking Purposes Guidelines 1996.
- During the construction of new bores, if saline or polluted water is encountered above the producing aquifer, then the water must be sealed off by casing to a sufficient depth to exclude the saline or polluted water from the work.

- Performance indicators include an indicator on the change in groundwater quality to ensure groundwater extraction does not result in a change in beneficial use (that is, a change in the quality) of the aquifer.

- The construction of new bores is not permitted within specified buffer zones (100–250 metres) from contaminated sources listed in a schedule to a plan. These generally involve waste/landfill sites, industrial areas, septic tanks and on-farm disposal pits.

Water quality monitoring

The New South Wales Government established the State Water Monitoring Coordination Committee to develop a coordinated, whole-of-Government approach to water monitoring. The Environment Protection Authority chairs the committee.[16]

Preparation of a State Water Monitoring Strategy was approved in 2001. As a first step, New South Wales established an interim approach to review, coordinate and streamline current water monitoring arrangements. The interim approach identifies:

- common protocols for water monitoring;

- avenues for accessing and sharing information; and

- current monitoring programs as a basis for considering future programs.

Data collected under the monitoring strategy will made publicly available via the Community Access to Natural Resource Information website (www.canri.nsw.gov.au).

New South Wales has about 30 water quality monitoring programs, including agency programs established to meet information needs of the Government (EPA 2003, p.6). The Environment Protection Authority identified several gaps in the State network, including limited monitoring of the ecological condition of waterways and limited ongoing biological and microbiological monitoring in estuarine and coastal systems (EPA 2003, pp. 9–10).

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16 The other member organisations are the Department of Infrastructure, Planning and Natural Resources, NSW Fisheries, the Sydney Catchment Authority, the Sydney Water Corporation, the Hunter Water Corporation, the NSW National Parks and Wildlife Service, State Forests of NSW, NSW Health, NSW Agriculture, the Local Government and Shires Association, NSW Waterwatch, the Commonwealth Scientific and Industrial Research Organisation, the Murray–Darling Basin Commission and the NSW Coastal Council.

Most indicators for physical and chemical properties and contaminants in use can be directly compared to an environmental quality benchmark value such as the trigger values in NWQMS paper no. 7, or site-specific trigger values developed in accordance with that paper. Some of the biological indicators can also be compared to benchmark values. The Environment Protection Authority stated, however, that no benchmark has yet been fully developed for many biological indicators, geomorphological and hydrological measurements. New South Wales is developing benchmarks through programs such as the Integrated Monitoring of Environmental Flows Program (EPA 2003, p. 3).

The water monitoring (river gauging) network continuously monitors temperature and conductivity (indicators of salinity) at an increasing number of gauging stations. The Department of Infrastructure, Planning and Natural Resources is also engaged in integrated monitoring projects, including the Integrated Monitoring of Environmental Flows and the Murray–Darling Basin Commission's Sustainable Rivers Audit pilot studies. The Sustainable Rivers Audit is considering a number of indicators at a catchment level. Once these indicators have been tested and verified during a pilot program that is under way, New South Wales will consider their adoption.

Market-based measures to promote water quality

New South Wales uses a variety of market-based measures to promote environmental outcomes in areas such as conserving biodiversity, reducing salinity, rehabilitating wetlands, allocating water within environmental limits and reducing in-stream nutrient levels. These instruments aim to modify behaviour by incorporating into market signals some or all of the costs that consumers or producers impose on others in the community through their use of natural resources.

- In June 2002, the Minister for Land and Water Conservation launched an Environmental Services Scheme that rewards rural landholders who help the environment through good land management. Land use initiatives supported through the scheme include the planting of native species using tubestock or direct seeding, commercial tree planting and earthworks for improved drainage.

- The Environment Protection Authority administers market-based measures to manage point-source pollution. Since July 1999, load-based pollution licensing has based the discharge fee on the pollution load released, to create pricing incentives for polluters to perform beyond minimum compliance standards.

- The Hunter Salinity Trading Scheme manages salt concentrations in the Hunter River by limiting the amount of saline mine water that can be discharged under normal flow conditions. Mine water must be stored on site and discharged when high river flows are capable of diluting it sufficiently. The scheme allows mines with the capacity to store large volumes of saline mine water to sell salinity discharge credits to mines where it is not viable to construct sufficient storage capacity.

- The TARGET Project, in the central west of the State, forms part of the NSW Salinity Strategy. The project aims to use incentives to bring about large-scale land use changes in areas that have been identified as major contributors to salinity in the Murray–Darling Basin.

- The Liverpool Plains Incentive Program, also part of the NSW Salinity Strategy, provides financial incentives to landholders to change land use and land management for biodiversity and salinity benefits. While focusing on addressing land degradation, the scheme also covers water quality.

Drinking water guidelines

NSW Health endorsed the Australian Drinking Water Guidelines 1996 (NWQMS paper no. 6). The guidelines are applicable to any water intended for drinking, regardless of whether it comes from rivers and streams, underground sources such as bores, or rainwater tanks. New South Wales water authorities report their water quality compliance against these guidelines. NSW Health provides a drinking water testing service to water authorities to assist water quality monitoring.

The New South Wales metropolitan urban water service providers (the Sydney Water Corporation, the Hunter Water Corporation, Gosford City Council and Wyong Shire Council) complied with the microbiological and physical/chemical requirements of the water quality standards set out in their licence in 2000-01. Each utility reports against the 1996 Australian Drinking Water Guidelines (DLWC 2002b, WSAA 2003).

New South Wales reported that in 2001-02, 71 per cent of nonmetropolitan water utilities complied with the microbiological water quality guidelines for E. coli, and 58 per cent complied for total coliforms; while 83 per cent of nonmetropolitan utilities complied with the physical guidelines and 82 per cent complied with the chemical guidelines. Ten per cent of nonmetropolitan utilities did not report on physical compliance and 6 per cent did not report on chemical compliance. The Government stated that all utilities should carry out and report on the necessary sampling in future (DLWC 2002b, p. xiii).

Wastewater management

The NSW Water Conservation Strategy, released in October 2000, contains 19 strategies and 55 actions to promote significant improvements in water conservation. In rural New South Wales, the Country Towns Water Supply and Sewerage Program provides for technical, management and financial support to local government in the provision of water supply and sewerage services. The program, which was revised in 2000, targets best management practices in the planning and delivery of services. Integrated urban water cycle planning is a condition of the program, which has incorporated wastewater pilot projects such as those at Rouse Hill, Shoalhaven Heads, Albury Wodonga, Quaker's Hill and the lower Hunter. In 2003, the Government announced a doubling of funding for the Shoalhaven Water Recycling Project (Minister for IPNR 2003).

The Ministry of Energy and Utilities reports annually on performance monitoring of all of the State's utilities in water supply and sewerage services. To improve coverage of social and environmental issues, all nonmetropolitan utilities were required to report on an additional 23 social and environmental indicators in 2001-02. The most recent data indicate that the Gosford City Council, the Hunter Water Corporation and the Sydney Water Corporation complied in 2001-02 with their Environment Protection Authority licence for wastewater (WSAA 2003).

Stormwater management

The New South Wales Government launched the Waterways Package in May 1997 to improve urban stormwater management and reduce waterway pollution. The package established:

- a Stormwater Trust Grants Scheme, which allocated A$51 million to local governments to undertake 252 stormwater projects throughout the State;
- an Urban Stormwater Education Project to educate the community, industry, local councils and other stakeholders about reducing urban stormwater pollution; and
- a stormwater management planning process, whereby local councils are required to prepare stormwater management plans on a catchment basis.

Over 20 projects have been implemented in catchments across the State. The Government allocated an additional A$20 million to the program in 2001-02, based on the positive outcomes achieved.

Discussion and assessment

New South Wales continues to make progress in implementing the NWQMS framework through a range of policies and initiatives. Significant developments since 2001 include:

- the development of long-term environmental objectives by the Healthy Rivers Commission for a number of river systems, drawing on NWQMS guidelines;
- the release of an Environment Protection Authority consultation paper on marine water quality objectives, drawing on NWQMS guidelines;
- the gazettal of the State Water Management Outcomes Plan, which sets overarching policy contexts, targets and strategic outcomes for water resources, accounting for the NWQMS requirements;
- water quality initiatives implemented through water sharing plans under the Water Management Act;
- the release of an interim approach to reviewing, coordinating and streamlining water monitoring arrangements;
- the development of new water quality benchmarks in accord with NWQMS methods;
- ongoing work on market-based measures to improve water quality; and
- an extension of the stormwater package.

The Council considers that New South Wales made satisfactory progress for the 2003 NCP assessment in implementing policies that reflect the NWQMS guidelines. As part of its full assessment of the entire water reform package in 2005, the Council will consider the State's progress in:

- developing marine water quality objectives;
- refining water quality monitoring arrangements; and
- achieving compliance of nonmetropolitan water utilities with the Australian Drinking Water Guidelines.

2.6 Water legislation review and reform

Assessment issue: New South Wales is to have reviewed and, where appropriate, reformed all legislation that restricts competition. Legislative restrictions that are retained must be shown to provide a net benefit to the whole community. Completion of review and reform obligations is a key element of the 2003 assessment. Where a review and/or reform implementation are not complete (or an appropriate transitional path to reform is not in place), the Council will consider that the relevant government has not complied with National Competition Policy obligations.

Next full assessment: This is the final assessment for legislation review and reform matters.

Reference: Competition Principles Agreement, clause 5

New South Wales's schedule of legislation review and reform activity lists 18 Acts, all of which were repealed by the Water Management Act. This Act improves the State's arrangements for water management (including water trading). While the provisions in the Water Management Act relating to water licensing and trading, as well as the first round of water sharing plans, are now scheduled not to commence until January 2004, this is to accommodate foreshadowed work by CoAG on a new intergovernmental water agreement.

The Council considers New South Wales has completed all obligations under the Competition Principles Agreement in relation to the review and reform of the stock of water industry legislation.