7 Tasmania

The elements of the water reform program that are relevant for Tasmania in this 2003 NCP assessment are: water and wastewater pricing; intrastate water trading arrangements; the remaining institutional reform requirements (primarily 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. In addition, Tasmania has under consideration a new rural water infrastructure project — the Meander Dam — that it must show satisfies the CoAG requirements on economic viability and ecological sustainability. The National Competition Council assessed Tasmania'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 Tasmania towards meeting water reform obligations on rural water pricing and the conversion of existing water allocations to water entitlements (which will be assessed in 2004) and the provision of water to the environment (which will be assessed in 2005).

7.1 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)–3(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)

Urban water and wastewater service providers

Assessment issue: Tasmania is to demonstrate that water and wastewater pricing by urban water and wastewater service providers achieves full cost recovery, in accord with the CoAG pricing principles. In a supplementary 2002 NCP assessment, seven local government water and wastewater service providers that were not applying full cost recovery committed to a strategy and timeframe for achieving this by the 2005 NCP assessment. Tasmania undertook to provide additional educational support to local governments to assist them meet the CoAG water reform obligations.

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 principles

In Tasmania, all urban retail water and wastewater services are provided by local government. There are 28 local governments offering water supply services, of which 27 also provide wastewater services. Three bulk water authorities provide services to 18 local governments. These are Hobart Regional Water Authority, the North West Regional Water Authority and the Esk Water Authority. The other 10 local governments mostly take, treat and reticulate water themselves.

In a supplementary 2002 NCP assessment (see section 1.4), Tasmania undertook to:

- revise and issue relevant guidelines and policy statements, provide educational material, targeted consultation and correspondence;

- develop a water reform education support program for local governments setting out the scope, objectives, methods and timing of the CoAG water reform program;

- conduct regional seminars and workshops for practitioners; and
- establish a website that draws together government water related information.

The revised Government Prices Oversight Commission (GPOC) guidelines — the Urban Water Pricing Guidelines for Local Government in Tasmania — are now available. The guidelines require local governments to set prices for their water and wastewater services to recover costs within a lower and upper limit. The lower limit is set at minimum business viability, and includes costs of operations and maintenance, administration and overheads, externalities, taxes and tax equivalents, renewals annuity and a return on capital (interest on debt and any dividends paid). The upper limit sets the maximum allowable revenue of a business. It has similar treatment of costs as the lower limit, except for capital-related costs. For these costs, the upper limit requires applying an appropriate market rate of return on capital (using the weighted average cost of capital) to the asset base (which is measured at either depreciated replacement cost or depreciated optimised replacement cost). The cost of asset consumption is measured by depreciation, and is to be based on fair value in accord with the accounting standard AASB 1041. The GPOC guidelines also require local governments to report any community service obligations (CSOs) they provide to the community, and local governments' own-use of water and wastewater services

To assist local governments with applying the guidelines, the Tasmanian Government conducted two workshops for local government officers on 26 and 27 February 2003 to raise awareness of full cost recovery obligations, including the need for appropriate asset valuation, and the identification and reporting of CSOs and externalities. Pricing issues were discussed in a presentation on water assets and the NCP given by the GPOC to a Tasmanian Audit Office Local Government Accounting Standards seminar. The Tasmanian Government also wrote to all local governments that provide water and wastewater services, encouraging them to test their 2003-04 rating policies against the full cost recovery obligations in the GPOC pricing guidelines, to ensure that the real rate of return on their assets meets the target in the guidelines.

The GPOC undertakes an audit annually to determine the extent of compliance by local governments with the obligation to achieve full cost recovery in relation to water and wastewater services. The GPOC audit for 2001-02 found that 21 of the 28 local government providers of water services, including two that were in an agreed two year transition to full cost recovery, were in practical compliance with the full cost recovery obligation. The audit also found that 24 of the 27 providers of wastewater services were in practical compliance.

Of the seven local government providers of water services that did not achieve full cost recovery, six achieved results below the lower limit of the cost recovery range and will need to increase prices, reduce costs or do both to achieve full cost recovery. The six under recovering local governments were Launceston, Clarence, Waratah-Wynyard, Break O'Day, Southern Midlands

and Central Highlands. The largest of these is Launceston, which under-recovered revenue in 2001-02 (after being deemed to be in practical compliance in 2000-01). The 2001-02 outcome was due, in part, to the treatment of bulk water dividends. Launceston considered these dividends as revenue to the water business whereas the GPOC guidelines state that dividends must be removed from revenues when determining cost recovery. Launceston also undertook an asset revaluation in 2002, which may have had an impact on its return. The one local government that exceeded the upper limit of the cost recovery range indicated that it expects to meet full cost recovery obligations after its 2003-04 budget (GPOC 2003).

The GPOC audit noted that a number of local government providers of water and wastewater services had not revalued infrastructure assets for some time, and that revaluation may result in significantly different asset values, and thus different revenue needs. The audit found that the methods of valuing water and wastewater infrastructure assets were varied. Six local governments determined asset values in accord with the accounting standard AASB 1041, and the remaining 22 applied various other accounting standards. The GPOC audit report stated that local governments will be required to move to using the accounting standard AASB 1041 by mid-2003, in preparation for the 2002-03 audit to be conducted in March 2004.

The GPOC audit also reported on businesses' compliance with various other aspects of Tasmania's Urban Water and Wastewater Pricing Guidelines, including the structure of tariffs, the Community Service Obligation guidelines, the reporting of own-use water transfers and cross-subsidisation. The audit found that the majority of local governments that use two-part tariffs had structured them in accord with the Urban Water and Wastewater Pricing Guidelines. Few local governments reported CSOs or identified own-use of water and wastewater services. Regarding own-use, GPOC stated that all local governments would have some form of water and wastewater service use through local government buildings, and that it is important this is identified and funded so that other water users are not cross-subsidising local government consumption.

In the 2001 NCP assessment, Tasmania reported that 14 of 28 providers of local government water services and nine of 27 providers of wastewater services earned sufficient revenue to recover at least the lower limit of the CoAG cost recovery band. In the 2002 NCP assessment, 19 of the 28 local government providers of water services, and 20 of the 27 providers of wastewater services were recovering costs in accord with CoAG cost recovery principles.

Submissions

Mr Robert Rockefeller (Nekon Pty Ltd) submitted that Tasmania's performance on cost recovery is poor. He cited several reasons for this, including: inaccuracies in information provided to the GPOC; the absence of ringfencing of water and wastewater businesses from local governments'

other activities (which also means that the dividend provided by the water and wastewater businesses is not transparent); the lack of recognition and appropriate funding of CSOs; and the fact that water leakages are not estimated and paid for from general rates. He considered the absence of ringfencing meant that Tasmania had not appropriately addressed institutional reform obligations. Mr Rockefeller considered that the GPOC full cost recovery audit of local governments' water and wastewater businesses does not go far enough in determining whether local governments are meeting the Tasmanian urban water pricing guidelines or the NCP requirements.

Mr Anthony Hocking (Enterprise Marketing and Research Services) submitted that many Tasmanian local governments are reluctant to address requirements on full cost recovery. He considered that local governments should be required to fully ringfence their water and wastewater businesses, and to identify any shortfalls in full cost recovery as CSOs (or their equivalent), quantify them and report them in local government annual reports. He also argued that local governments should pay for their own use of the water and wastewater services.

Mr Hocking believed that the updated GPOC audit template provides an opportunity to gather much information on the extent to which Tasmania is implementing water reform. He welcomed the GPOC's more comprehensive reporting of the audit outcomes. He considered that the Tasmanian *Local Government Act 1993* should clearly state the powers and responsibilities of local government authorities with respect to the NCP.

Discussion and assessment

As it undertook in the supplementary 2002 NCP assessment to do, the Tasmanian Government provided additional support to local governments to help them achieve full cost recovery. This support included the revision and issue of the pricing guidelines, the provision of educational material, targeted consultation and correspondence, the conduct of regional seminars and workshops for practitioners, and the development of a web site that draws together Tasmanian Government water-related information.

Tasmania's Urban Water and Wastewater Pricing Guidelines impose obligations on local governments that are consistent with the CoAG pricing principles, including on asset valuation methods and the reporting of CSOs and environmental costs incurred by water businesses. The guidelines also expect that local governments will measure (or reasonably estimate) the water that they use themselves and pay for this use. The guidelines state that own-use should be disclosed as a transfer from general funds or departmental budgets (unless otherwise defined) and reported as a CSO. The Council considers that the guidelines appropriately reflect the CoAG pricing principles. Submission makers placed considerable importance on the GPOC auditing local governments' application of the (now revised) urban water and wastewater pricing guidelines. The GPOC audit for 2001-02 did this.

The most recent GPOC pricing audit (for 2001-02) found that 21 of the 28 local government water service providers were in practical compliance with the full cost recovery obligation, including two that were in an agreed two-year transition to full cost recovery. The audit showed that all larger local government water service providers were pricing within the cost recovery band apart from the Launceston City Council and the Clarence City Council. The seven local governments that the GPOC identified as not complying with full cost recovery obligations in 2000-01 each committed to a strategy and timeframe for reaching full cost recovery. While the timeframes for this vary among these local governments, each expects to achieve full cost recovery by the 2005 NCP assessment.

Tasmania's pricing guidelines now require an approach to asset valuation that is consistent with the CoAG pricing principles. The GPOC audit indicated, however, that most local government providers of water and wastewater services are yet to value assets in accord with the revised guidelines, and that the various other methods of asset valuation employed (together with the length of time since last revaluation) will have an impact on the extent of over or under recovery of costs. The Tasmanian Government expects all providers of local government water and wastewater services to adopt the complying asset valuation method by mid-2003.

Tasmania's pricing guidelines contain guidance on CSOs and own-use transfers that is consistent with the CoAG pricing obligations. Despite this, the GPOC audit found that only a small number of local governments were complying with the requirements on CSO reporting and own-use. This is an area that Tasmania will need to develop before the Council next assesses the State's compliance with the CoAG urban water and wastewater pricing obligations in 2005.

Two submissions argued that Tasmania's local government water and wastewater businesses should be ringfenced from other local government activities, and that this would assist transparency and meet institutional reform obligations. The CoAG water reform agreement does not require ringfencing of water and wastewater businesses. The CoAG obligation on structural separation is that, as far as possible, the roles of standard setting and regulatory enforcement and service provision are to be separated institutionally.

In a previous NCP assessment, the Council recognised that the small size of many water businesses meant that this obligation is best met by ensuring accountability and transparency in setting and reporting prices and service standards. Tasmania's approach is rigorous and transparent, and allows ready scrutiny of water and wastewater pricing and service provision. The urban water and wastewater pricing and other guidelines, together with the annual GPOC audit, provide detailed financial performance feedback to local government water and wastewater providers and advice on areas of weakness and ways of improving performance. The GPOC audit report is publicly available. Local governments appear to have been responsive to the GPOC process, as is indicated with the improvement in cost recovery over recent years.

The Council considers Tasmania has complied with its full cost recovery obligations for this 2003 NCP assessment. While Tasmania expects that some smaller local governments will not achieve full cost recovery until 2005, there is no reason to believe, on current evidence and given the direction provided via the annual GPOC audits, that this will not occur. The Council will look in the 2005 NCP assessment for Tasmania to have rectified the weaknesses that the annual GPOC audit identified; including local governments' identifying and reporting their CSOs and their own-use of water and wastewater services.

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 costly investments. In the 2002 NCP assessment, the Council found that 17 of 18 water service providers had introduced a two-part tariff following either a commitment to do so or a study that showed the introduction of a two-part tariff would be cost-effective. The Council had limited information on trade waste charging including by service providers in the local government areas where the largest dischargers are located (Devonport, Hobart, Launceston, Circular Head, Central Coast, Glenorchy and Burnie).

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 Tasmania, all urban retail water services are provided by local government — 28 local governments operate 90 water supply schemes. In 1999, Tasmania required all local governments to assess whether the implementation of two-part tariff pricing structures would be cost-effective. This assessment was undertaken with reference to the GPOC report *Investigation into the cost-effectiveness of local governments implementing two-part pricing for urban water services*. The assessment was supervised by a review panel comprising representatives of the Department of Primary Industries, Water and Environment, the Department of Treasury and Finance, the Department of the Premier and Cabinet, and the Local Government Association of Tasmania.

Of the 90 water schemes under local government management, 50 were considered for application of consumption-based pricing. Five schemes already charged for water services using a two-part tariff, and a further 11 undertook to implement a water service two-part tariff without a cost-effectiveness study. The remaining 34 water supply schemes undertook a cost-effectiveness assessment of consumption-based pricing in accord with the

GPOC report.[1] These assessments showed that it would be cost-effective for seven water supply schemes to introduce consumption-based prices.

The outcome of Tasmania's process was that 18 water businesses had either elected to introduce a two-part tariff or should do so based on the cost-effectiveness study. Of these, 17 have now introduced a two-part tariff. The exception is Derwent Valley, where experience with a metering trial led to a further study that found it would no longer be cost-effective for Derwent Valley to implement consumption-based pricing.

Tasmania reported in the 1999 NCP assessment that while some local governments apply volumetric charges for wastewater services supplied to commercial and industrial customers, most applied a charge based on property value, with a fixed minimum. Five local governments applied a uniform fixed charge for wastewater services. The Hobart City Council sets wastewater charges using property values with no minimum fixed charge.

Local governments may enter agreements with waste dischargers to recoup the additional costs of treating trade waste. Several local governments have trade waste agreements with large dischargers that set charges on a volume basis. These local governments include Burnie, Central Coast and Circular Head. Some — including Hobart, Devonport and Glenorchy — have volume-related trade waste charging regimes applying to high volume or high strength dischargers. Launceston developed a trade waste charging policy comprising multiple tariffs based on volume and pollutant loads and has trialled the policy. Launceston has appointed consultants to review the trial results, develop proposed charge levels and advise on the policy's application.

Local governments may also establish By-laws under the Local Government Act on trade waste issues. The larger local governments — Devonport, Glenorchy, Hobart and Launceston — have trade waste policies and guidelines supported by By-laws. Other local governments, including Brighton, Central Highlands, Clarence, Huon Valley, Kingborough, Sorell and Tasman have sewer and/or drainage by-laws.

The Department of Primary Industries, Water and Environment issued guidelines identifying the type of liquid wastes that may be discharged into sewers under its Sewerage Management Program. Through this program, the department has been working with local governments to identify sources of trade waste. The department also developed a model trade waste agreement to assist local governments to establish trade waste agreements with significant dischargers.

[1] The review panel did not require 40 of the 90 schemes to undertake a more extensive cost-effectiveness study because of their small size and/or because the screening test developed by the GPOC required metering.

Discussion and assessment

All but one of the 18 Tasmanian local government water service businesses that the 1999 pricing review panel considered should employ consumption-based pricing for water services are now doing so. The exception — Derwent Valley — is not pricing on a use basis after information from a metering trial showed that introducing a two-part tariff would not be cost-effective.

Some 68 local government water supply schemes do not use a consumption-based approach. While nonuse-based pricing by these local governments does not raise NCP compliance questions (because the pricing obligation depends on the move to consumption-based pricing being cost-effective), it does mean that there are likely to be continuing cross-subsidies among different classes of customers and between water and wastewater services.

The two submissions that discussed approaches to pricing and related matters by Tasmanian local government water and wastewater businesses claimed that cross-subsidies are prevalent. The most recent GPOC audit of local government water and wastewater financial performance concluded that inefficiencies and cross-subsidies are an inevitable outcome where a two-part tariff is not employed, although it also considered that inefficiencies may be even greater if a local government introduces metering that is not warranted on net benefit grounds. Matters relating to cross-subsidies are discussed in the following section.

Most local governments where the larger dischargers are located appear to have some form of consumption-related trade waste charge. They apply use-based trade waste charges either via specific agreements with large dischargers or by imposing a use-based pricing regime for the waste disposal service supplied. (Launceston is currently developing a trade waste charging regime.) Residential wastewater charges are generally set by reference to property value and a minimum fixed charge, which has the potential to introduce cross-subsidies to the extent that waste disposal differs among households. The Council accepts that it is unlikely to be cost-effective to impose consumption-based charges for residential waste disposal.

The Council considers that Tasmania met CoAG obligations relating to consumption-based pricing for water and wastewater services for this 2003 NCP assessment. There are related issues, including the transparency of cross-subsidies, which Tasmania will need to address however (see below). The Council will monitor Launceston's implementation of a trade waste charging regime in future NCP assessments.

Cross-subsidies

Assessment issue: Tasmania is to ideally remove cross-subsidies where they are not consistent with efficient and effective service, use and provision or, where cross-subsidies remain, ensure they are transparently reported. In the 2002 NCP assessment, Tasmania had not advised how it intended to identify and report any remaining 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, clause 3(a)–(i); CoAG pricing principles

As discussed above, many local governments base water charges on property values, including some of the State's largest local government water providers. To address its water pricing obligations, the Tasmanian Government requested the GPOC to examine whether the use of property-based charges leads to cross-subsidies that are likely to create inefficiencies in the use and provision of water and wastewater services. The GPOC audit of local government water and wastewater businesses' performance in 2001-02 found that the absence of two-part pricing creates inefficiencies and may introduce cross-subsidies. The audit report considered, however, that these inefficiencies may be less than the inefficiencies that would arise if a local government introduced and administered a metering scheme that did not deliver a net benefit. The audit report considered that using property value or connection size to allocate the access (fixed cost) component of the two-part tariff is not necessarily inefficient and does not introduce a cross-subsidy provided the access charge does not exceed the value that a consumer places on connection to the network.

Submissions

The Tasmanian Conservation Trust submitted that Hobart, Clarence, Kingborough and Glenorchy are not using consumption-based pricing for water services and do not identify cross-subsidies. The trust also stated that it is not aware of any efforts by the Tasmanian Government to conduct public education and consultation programs on consumption-based pricing and cross-subsidies. The trust said that this work is left to individual local governments. It considered that multiparty discussions involving the National Competition Council, the State Government and local governments is the only way to progress these reforms.

Mr Robert Rockefeller (Nekon Pty Ltd) submitted that Tasmania's implementation of consumption-based pricing and removal or identification of cross-subsidies is poor. He considered that local governments that are not setting prices on a use basis are incapable of identifying cross-subsidies. Mr Rockefeller pointed to the frequent use of property-based charges for water and wastewater services, and what he considers to be excessive free water allowances by several local governments that employ a two-part tariff. He considered that there are significant nontransparent cross-subsidies from low

volume water users to high volume users in most of Tasmania and that there is also likely to be extensive cross-subsidisation between various classes of users, including between residential and commercial customers.

Mr Anthony Hocking (Enterprise Marketing and Research Services) submitted that many Tasmanian local governments are reluctant to address requirements on consumption-based pricing and the removal and/or reporting of cross-subsidies between different classes of consumer. He stated that the social objectives considered by the Tasmanian Government as acceptable rationales for rejecting consumption-based pricing are not clear.

Mr Hocking considered that local governments' annual reports should identify cross-subsidies between classes of water users, CSOs, the contribution to revenue from fixed and volumetric water charges, excess water rates and real rates of return on water assets, and should reconcile the amount of water used with the amount of bulk water taken from a water authority. He considered that local governments in Southern Tasmania that do not have water meters are unable to accurately identify cross-subsidies, which arise as a result of (1) disparity between the values of business properties and the volume of water they use and (2) variations in residential customers' water use that bear no relationship to property values. He also noted that the absence of meters means that it is not possible to estimate leakage.

Discussion and assessment

As recognised by the GPOC, charges for the use of water that are based on property value (or other nonuse measures) are unlikely to reflect well the cost of services provided to different customer classes, and so will probably introduce cross-subsidies. In addition, the existence of free water allowances can also have the effect of introducing cross-subsidies.

Tasmanian local governments have implemented consumption-based pricing where cost-effective. Tasmania subjected 34 local governments (selected according to a test developed by the GPOC), to cost-effectiveness studies, finding seven should change to a two-part tariff. A further 11 schemes were to voluntarily introduce two-part tariffs. Of these 18, 17 have introduced a two-part tariff. The one exception found, in a metering trial subsequent to the initial work, that a two-part tariff would not be cost-effective. The larger local governments have trade waste agreements with large dischargers or pricing regimes based on the volume and toxicity of discharge.

The GPOC audit of local government water businesses for 2001-02 found that most local governments that are required to apply consumption-based pricing for water services have done so appropriately. The audit found, however, that the local governments that were not using consumption-based pricing were not identifying and funding cross-subsidies, and that few were reporting own-use transfers, meaning that other water users were cross-subsidising local governments' water consumption. The audit also found that few local governments were reporting CSOs The existence of cross-subsidies arising

from nonuse-based pricing by the other local governments does not contravene the CoAG pricing obligations, although all such cross-subsidies should be transparently reported. The Council will look for Tasmania to demonstrate that remaining cross-subsidies and all CSOs are fully reported consistent with CoAG obligations when it next assesses the State's implementation of urban water and wastewater pricing obligations in 2005.

Free water allowances provide a disincentive for water conservation. They have the potential to create nontransparent cross-subsidies to the extent that they are set at a level above that necessary to achieve public health objectives. The Council will consider the extent of remaining free water allowances when it next assesses Tasmania's implementation of urban water and wastewater pricing obligations in 2005.

Rural water service providers: progress report

Progress report: Tasmania is to demonstrate progress towards achieving full cost recovery for irrigation districts. In the 2002 NCP assessment, the Council found that some irrigation districts were not recovering full costs as defined by the CoAG pricing guidelines.

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

Tasmania sources less than 10 per cent of irrigation water used in the State from publicly-owned infrastructure. The vast majority of irrigation water is sourced from unregulated streams or from farm storages utilising privately funded infrastructure.

There are three Government owned irrigation schemes in the State: Cressy–Longford, South–East and Winnaleah. On 1 April 2002, management of the Cressy–Longford Irrigation Scheme was devolved from the Rivers and Water Supply Commission to the Cressy–Longford Irrigators Association. The operation and management of the Winnaleah Irrigation Scheme was devolved to local irrigators on 1 July 2003. The South–East Irrigation Scheme is currently managed by the Rivers and Water Supply Commission. Water pricing for the irrigation schemes is set through the business plans for each scheme.

The Cressy–Longford Irrigation Scheme

Water pricing for the Cressy–Longford Irrigation Scheme comprises a fixed charge per megalitre of irrigation entitlement and a volumetric charge per megalitre of water actually used. Since 1997, water prices have risen to achieve full recovery of operational, maintenance, administration and asset consumption costs. This has been achieved by establishing a revenue target and then setting water prices to meet this target, based on the rolling five

year average of water sales. The financial costs (interest and repayment of the loans taken out to establish the scheme) are not included in the revenue target because they are treated as a Government subsidy to the scheme.

The Winnaleah Irrigation Scheme

Water pricing for the Winnaleah Irrigation Scheme comprises a fixed charge per megalitre of irrigation entitlement and a volumetric charge per megalitre of water actually used, with the volumetric charge varying over the irrigation season. The pricing system was suggested by scheme users and adopted by the Rivers and Water Supply Commission in 1999-2000. It aims to encourage greater water use in the off-peak seasons and to discourage use (or at least fully account for marginal costs) at the peak of the season.

Since 1997, water prices have risen to achieve full recovery of operational, maintenance, administration and asset consumption costs. This has been achieved by establishing a revenue target and then setting water prices to meet this target, based on the rolling five year average of water sales. As with the Cressy–Longford Scheme, the financial costs (interest and repayment of the loans taken out to establish the scheme) are not included in the revenue target because they are treated as a Government subsidy to the scheme. The scheme achieved full cost recovery in 1998-99. At this time, the costing for asset consumption was changed from straight line depreciation to an asset renewal levy.

The South–East Irrigation Scheme

Water pricing by the South–East Irrigation Scheme comprises a fixed charge based on the amount of irrigation entitlement held. Since 1997 water prices have risen with the intention of achieving full recovery of operational, maintenance, administration and asset consumption costs by 2006.

7.2 Water management progress report: water rights and provisions to the environment

Establishment of water rights systems

Progress report: Tasmania is to report on progress towards converting existing allocations to new water rights systems, and in implementing mechanisms to support these systems.

Next full assessment: The Council will assess the Government's compliance with CoAG obligations on implementing water rights arrangements in 2004.

Reference: CoAG water reform agreement, clause 4

From January 2000, the *Water Management Act 1999* established a system of water entitlements whereby licences (and water allocations) are not legally attached to land titles and are transferable. Licences are specified in volumetric terms and also indicate the reliability of the water allocations. To obtain a water allocation, a person must hold a water licence.[2] Licences are issued for 10 years, with a presumption of renewal, and are subject to a review of conditions after five years.[3] In the transition from the previous system of water rights, the Minister may vary the conditions or reduce the water allocation on a licence, or impose restrictions on the taking of water, to meet environmental requirements.

Within formal irrigation districts, the Rivers and Water Supply Commission's previous water entitlements were preserved as a licence issued under the Water Management Act. Under the Act, the commission is subject to the same requirements as other water licensees. The *Irrigation Clauses Act 1973* (as amended in 1997 and 2001) established a system of irrigation rights within irrigation districts. The rights are separate from land and transferable within the district. Only an owner or occupier of land in the district, or a person who may hold land in the district, may hold irrigation rights. A holder of an

[2] Riparian and casual land users may take water without a licence for stock and domestic purposes. Occupiers of land may take surface water (not flowing in a watercourse) and groundwater for any purpose. These entitlements are subject to the taking of water not leading to environmental harm and not being contrary to a water management plan. Water may not be taken in excess of reasonable requirements and maximum takes may be set by Regulation.

[3] Special licences are issued for 99 years to corporate bodies using water to generate at least 400 gigawatt hours of electricity annually or to other bodies approved by an advisory committee comprised of relevant Ministers. Special licences have been issued for Hydro Tasmania and the Wesley Vale pulp and paper mill.

irrigation right who no longer owns or occupies land in the district must transfer the right within six months or forfeit it. The Minister may give a single extension of six months.

Under the Water Management Act, a water licence holder is entitled to compensation when it is necessary to reduce water allocations in situations where total allocations exceed the quantity of water available or where there is inconsistency with the objectives of the Act. No compensation is payable, however, where the reduction in allocations is required to meet an environmental water provision in an approved water management plan (see next section on provision of water to the environment).

The Water Management Act provides for a register of licences, which includes provision for registering financial interests. The Department of Primary Industries, Water and Environment maintains the register, which is known as the Water Information Management System.

Reform progress

Tasmania advised that, by the end of April 2003, the process of converting water allocated under the previous system to licences and allocations under the new system was largely complete. The main exceptions were the water rights for two urban water authorities (Hobart and Cradle Coast) and one town supply (Burnie Council), and some Rivers and Water Supply Commission irrigation scheme licences. Tasmania expected the conversion process to be completed by 31 December 2003.

Provision of water to the environment

Progress report: Tasmania is to report on progress in implementing allocations to the environment by listing all draft and final water management plans and explaining each plan's stage of development.

Next full assessment: The Council will assess the Government's progress in implementing CoAG obligations on the allocation of water to the environment in 2004, consistent with the CoAG requirement that allocations be substantially completed by 2005.

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

Under its water for ecosystems policy, Tasmania is addressing water allocations for the environment in two stages.

- The Department of Primary Industries, Water and Environment is determining environmental water requirements to address the flow requirements for the State's rivers. The department uses detailed scientific methods and local knowledge for stressed (or more developed)

water sources.[4] Rapid (desktop) assessment methods are used for lower priority water resources. An environmental water requirement is a description of the water regime needed to sustain the ecological values of aquatic ecosystems at a low level of risk.

- For stressed (or more developed) water sources, an environmental water provision is preserved for the environment by agreement or negotiation with the community and incorporation in a water management plan. The environmental water provision may be based on environmental, economic and social considerations. It represents that part of the environmental water requirement that can be met. (In unstressed systems, the environmental water provision is set equal to the environmental water requirement.)

Since 1995, environmental flows in summer in water courses that are considered to be stressed (or more developed) have been protected through two measures: (1) a policy of not issuing new water licences on these systems; and (2) the implementation of restriction thresholds on water extraction during summer. These restrictions are only lifted when an appropriate environmental flow regime is established. Additional temporary allocations have been provided on some rivers where environmental flow requirements are expected to be readily met.

Under the Water Management Act, in areas where a water management plan has not been developed, the Minister may approve applications for new water allocations (including water taken into dams) only when this would meet the objectives of the Act. The Act's objectives include the sustainable use of the water resources and the maintenance of ecological processes and genetic diversity for aquatic ecosystems.

Overland flows can be included in water management plans and regulated under the Act as necessary. At the time of the 2002 NCP assessment, Tasmania was in the process of developing a specific policy to manage the cumulative impact of farm dam development. A statutory committee, the Assessment Committee for Dam Construction, is responsible for assessing applications for the construction of new dams, with environmental matters considered by a subcommittee, the Technical Advisory Committee.

[4] In the 2001 NCP assessment, the Council noted that the National Land and Water Resource Audit in 2000 identified no overallocated surface water or groundwater sources in Tasmania. The Department of Primary Industries, Water and Environment, however, noted some critical shortfalls during summer and considered that at least two systems, the South Esk and the Meander, could be considered to be overdeveloped or stressed.

Reform progress

Water management plans

Tasmania identified 14 water sources for which it intends to develop water management plans (see table 7.1). Following the determination of environmental water requirements for the Coal River during 2002-03, environmental water requirements have been determined for all of these water sources. Establishing environmental water provisions for these rivers depends on the Government also developing the water management plans. At 30 June 2003, no water management plans had been completed, although the Great Forester plan was almost finalised.

Tasmania's timetable (dated September 2002) for developing its water management plans is shown in table 7.1. The timetable indicates that Tasmania expected to have completed six plans by the time of this 2003 NCP assessment. Tasmania proposes to revise the timetable once the Department of Primary Industries, Water and Environment has completed a review of the Great Forester plan (expected mid-2003). The purpose of the review is to develop generic principles to guide the preparation of future plans. Tasmania considers that an agreement on the principles by the key stakeholders (including the Tasmanian Conservation Trust and the Tasmanian Farmers and Graziers Association) would greatly accelerate the development of water management plans. On this basis, Tasmania expected to substantially complete environmental water provisions for the water sources on its agreed implementation program by 2005.

Tasmania noted that the public exhibition of the draft plan for the Great Forester catchment (in the first half of 2002) provided an opportunity to better understand the issues of and processes for preparing water management plans. The Government established a local consultative group, which includes a representative of environmental groups, to assist in finalising the plan. The group will continue to work with the Department of Primary Industries, Water and Environment on ongoing water management issues relevant to the plan. As a result of this process, the department established similar consultative groups for other catchments.

Tasmania provided the Council with the penultimate draft of the Great Forester water management plan. Following 'sign off' by the local consultative group, the plan was undergoing a final round of consultation with statutory officers. The plan was expected to be submitted to the Minister in mid-2003.

Table 7.1: Timetable for water management plans in Tasmania, September 2002

Water management plan	*Expected completion*
Brumbys Creek	2005
Clyde River	2005
Coal River	2004
Elizabeth River	2002
Great Forester River	2004
Lake River	2002
Liffey River	2002
Macquarie River	2004
Meander River	2002
Mersey River	2002
North Esk River	2005
Ringarooma River	2004
St Patricks River	2005
Tooms River	2002

Other developments

In relation to the determination of environmental water requirements for other water sources on its agreed implementation program, Tasmania considered that it is making significant progress. It indicated, however, that delays continued to be experienced for three catchments. Reports on the environmental water requirements for the Welcome, Montagu and Jordan catchments are expected to be completed by September 2003.

Tasmania advised that its previously proposed 'farm dams policy' now comprises:

- guidelines for assessing applications for new water allocations from watercourses (including for proposed dams), a draft of which has been released for public consultation; and

- a project on the conservation of freshwater ecosystem values, which is being undertaken by the Department of Primary Industries, Water and Environment with the aim of designing and implementing a system to identify and conserve Tasmania's significant freshwater conservation values.

To assist in the assessment of water licence applications for winter flows, in 2002 the department developed a model to better estimate the available water yield after meeting environmental flows. The model has been extended to the assessment of all water licence applications. It also formed the basis for the draft policy guidelines for assessing applications for new water allocations noted above.

Submissions

The Tasmanian Conservation Trust expressed concern that, in the 12 months since the previous NCP assessment, not one water management plan had been finalised. The trust stated:

> *… the provision of water for the environment through the implementation of water management plans has been an abject failure to date. In particular, ARMCANZ principles 2, 5, 6 and 9 have been wilfully and knowingly contravened by the Tasmanian Government in order to appease water users. It is difficult to imagine this situation changing in the near future.*
>
> *Further, there are only two dedicated staff to implement water management plans. The water development branch, on the other hand, has 5 staff, and has spent approximately $1.5 million investigating large water storage proposals, none of which have eventuated.* (TCT 2003, p. 5)

In relation to the Great Forester River, the Tasmanian Conservation Trust considered that there are several positive aspects about the amended draft water management plan released in September 2002. In particular, the trust welcomed the commitments to install water meters, monitor the impacts on threatened species and track land use changes (such as the conversion of pasture or native forests to plantation forests).

The trust considered, however, that the minimum flow levels in the revised draft plan were disappointing. It commented that:

> *The suggested level of 30 ML per day, across the entire irrigation period, is only a minor improvement on the current situation. Maintaining this target for three years … effectively locks the Great Forester catchment into a situation where there is a high level of risk of damage to the environment until 2006. This is unacceptable.* (TCT 2003, p. 3)

The trust raised three specific concerns with the draft plan.

- The flow regime in the plan is not an environmental flow regime. The specified minimum flow is significantly lower than current knowledge indicates would be required for a low or moderate risk of damage to the environment. At a constant 30 megalitres a day, the minimum flow level in no way mimics natural flows. In all but the wettest of irrigation seasons, environmental flows will not improve significantly.

- The flow regime appears to be at odds with the requirements of the Water Management Act as well as the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) National Principles for the Provision of Water for Ecosystems, particularly principle 2 (provision of water for ecosystems should be on the basis of the best scientific information available on the water regimes necessary to sustain the ecological values of water dependent ecosystems).

- As this is the first water management plan to be developed by Tasmania, it sets a dangerous precedent for other consultative committees that environmental flows are the least important part of the process.

The trust provided the following comments on other water management plans.

- Clyde. The plan must deal with two issues: (1) the artificial regulation of two lakes (Sorell and Crescent) and (2) the management of the river itself. Considerable progress has been made on the first issue. There is hope that the plan may satisfy all parties and also meet CoAG requirements. The plan may be completed in 2003.

- Meander. The development of the plan was informally postponed by the department in early 2002, in response to the uncertainties over the Meander Dam proposal. There has not been a public meeting or formal correspondence on the plan since December 2001. The delay is unacceptable. The department has announced that it will continue to allocate temporary water rights in the valley, in anticipation of the dam being built, which adds to expectations and distracts from sustainable water management. It is not possible to estimate when the plan may be completed.

- Mersey. The process commenced only in late 2002 and it is unclear whether there has been any real progress. The plan is unlikely to be completed in 2003.

- Ringarooma. The trust has not received any formal correspondence or updates on the plan since May 2002. The delay is unacceptable. The plan is unlikely to be completed in 2003.

The Tasmanian Conservation Trust criticised the Tasmanian Government's public consultation and education on water management issues, stating that it has been 'erratic and irregular' and that the Tasmanian Government 'appears to only pay heed to water users'. The trust indicated that on a number of occasions it suggested the establishment of Statewide reference groups (consisting of core conservation, community and industry representatives) to assist the development of water management plans, but this had been to no avail. In contrast, it pointed to the establishment of a new working group on environmental flows (consisting only of the Tasmanian Farmers and Graziers Association and the Department of Primary Industries, Water and Environment) following a meeting between the association and the Minister in March 2003.

Mr Anthony Hocking (Enterprise Marketing and Research Services) was concerned that the allocation of Tasmania's water resources, while:

> … *nominally at the disposal of the Rivers and Water Supply Commission … has effectively been determined by and predominantly in response to the needs of the HEC, now Hydro Tasmania.* (Hocking 2003, p. 16)

In commenting on the need for farmers in the South Esk catchment to negotiate with Hydro Tasmania to purchase additional water allocations, Mr Hocking found it '… curious that Hydro Tasmania should have … a dual role as both a user and an allocator of water'. He considered that this raised the questions of whether water is being allocated efficiently and of the respective roles of Hydro Tasmania and the Rivers and Water Supply Commission.[5]

Discussion

Tasmania has determined environmental water requirements for all of its stressed rivers. Pending the development of water management plans, environmental flows are protected through the moratorium on the issue of new water licences and the implementation of water use restriction thresholds.

As the Council noted in previous NCP assessments, however, the process for determining environmental water provisions (that is, the water to be preserved for the environment) continues to be slower than Tasmania anticipated. At the end of June 2003, only one of 14 water management plans was nearing completion.

Tasmania considered that, following the finalisation of its first plan, the development of generic principles to guide the preparation of future plans will accelerate the process. On this basis, Tasmania still expects to substantially complete environmental water provisions for the water resources on its agreed implementation program by 2005. This would be sufficient to meet CoAG obligations.

In relation to the water management plan for the Great Forester catchment, the Tasmanian Government provided the following responses to the matters raised by the Tasmanian Conservation Trust.

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[5] Under the Water Management Act, the Minister for Primary Industries, Water and Environment is responsible for water licensing and allocations. In undertaking this role, the Minister is advised by the Department of Primary Industries, Water and Environment, and not by the Rivers and Water Supply Commission or Hydro Tasmania. (See also section 7.4.)

- River health monitoring surveys and a comprehensive report on the state of the catchment (DPIWE 1999a) indicate that, overall, the catchment is in good health, particularly in the middle to upper reaches. Sites that were assessed as being in poorer ecological condition showed a strong relationship with adjacent land use rather than with stream flow.[6] The report indicates that river habitat condition and nutrient loading as a result of land use in the middle reaches are the major drivers of river health.

- A pyrethrum spill in April 1994, resulting from a dam failure, demonstrates that the Great Forester River is highly resilient to disturbance, with ecological resilience widely recognised as a key indicator of ecological sustainability. The spill caused high mortality in both fish and crayfish populations for up to 15 kilometres downstream. A report on the recovery of the river from this event concluded that the river had 'recovered' to an acceptable condition within two years (with the exception of two fish species that were recovering more slowly) (DPIF 1996). This ecological recovery occurred under a water use and management regime that was less favourable to the environment than the environmental water provision proposed in the water management plan.

- The environmental water requirement was determined to meet the needs of the natural ecosystem values and recreational fishing values. The monthly environmental water requirements represent the flow required to maintain greater than 85 per cent of habitat for native fish species and trout and 90 per cent of macroinvertebrate taxa with greater than 75 per cent of habitat. This represents a 'no/low risk' scenario for the key ecological and recreational fishing values that were assessed.

- The Great Forester River is an unregulated river. Estimated extraction represents only about 6 per cent of the median annual flow, with most of this water taken directly from the river during the irrigation season. Because of this, the environmental water provision (that is, the amount preserved for the environment in the plan) has focused on providing a base flow in summer. The proposed plan provides for a minimum managed flow of 30 megalitres per day. Warnings of impending irrigation restrictions commence at 45 megalitres per day, with restrictions enforced at 40 megalitres per day. This is a significant improvement on the existing cease-to-pump trigger level of 25 megalitres per day.[7] The minimum flow

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6 The Council notes that a report included with the state of the rivers report includes the following comment on the main stream of the Great Forester River: 'The hydrology sub-index scores were low overall for most sites, indicating extraction rates for the summer period are high and may be strongly influencing instream processes.' (DPIWE 1999b, p. 13)

7 The proposed cease-to-pump trigger effectively permits extractions of 56–80 per cent of natural flows from December to April. This is an improvement over existing conditions (where 64–84 per cent of natural flows can be extracted) but is significantly less than the recommended environmental water requirement (which would limit extractions to 6–36 per cent of natural flows).

presents a low risk of environmental change for native fish and for 16 out of 21 macroinvertebrate taxa. Even the high risk taxa, however, have recolonised the river after the pyrethrum spill under the existing (less favourable) flow regime.

- While the environmental water provision in the plan is less than the 'low risk' environmental water requirement during summer, the environmental water requirement study predicted that the river should be in worse condition than is indicated by river health monitoring. Based on the river health monitoring and the resilience of the river following the pyrethrum spill, Tasmania considers that the environmental water provision in the plan poses little risk to the ecological condition of the river in the short to medium term. The uncertainty regarding the long-term risk, combined with the socioeconomic impacts that would be associated with immediate implementation of the 'low risk' environmental water requirement, provides a compelling justification for the approach adopted in the plan.

- The department has committed to an extensive monitoring program and further research to improve the understanding of the river's water requirements. The results of the monitoring and research will be used to review the impact of the plan's environmental water provision over the next three years.

- The Government considers that the environmental water provision in the plan meets the objectives of the Water Management Act, as the plan provides water to maintain the ecological processes and genetic diversity of aquatic ecosystems. The Government also considers that the plan complies with CoAG environmental water obligations. The environmental water provision in the plan was developed using the best scientific information available (principle 2 of the National Principles for the Provision of Water for Ecosystems) and following extensive consultation with all relevant stakeholders (principle 12). The plan goes as far as possible to meet the water regime necessary to sustain ecological values while recognising the existing rights of water users (principle 4). It also provides considerably more water for the environment (at least a 20 per cent increase in summer minimum flows) than previously (principle 5).

- The negotiations on the environmental water provisions for other plans are actively considering lower levels of risk than accepted for the Great Forester catchment. Based on a six-year monitoring program, the minimum flow being negotiated for the Mersey River, for example, represents a 'low risk' environmental flow. The Government considers that different environmental water provision outcomes in different catchments demonstrate that the water management planning process is flexible, accommodating the various values of stakeholder groups while ensuring sound ecological outcomes.

While the latest draft plan includes environmental water provisions that are significantly less than the estimated environmental water requirements during summer, the provisions are an improvement and are to be reviewed within three years (whereas the usual requirement is for a review after five

years). Based on the additional information provided by Tasmania, including the results of the river health monitoring surveys and the resilience of the river to the pyrethrum spill, it appears unlikely that the environmental water provisions in the plan would compromise the ecological condition of the river before the proposed review. In the three years until the review, Tasmania has committed to undertake extensive monitoring and further research to improve the understanding of the river's water requirements. The department is required to publish an annual monitoring and assessment report on the plan and hold a public meeting on the report. As a result of the plan's requirement for water use to be metered, Tasmania also expects to obtain a better understanding of actual water use.

As the Great Forester plan is still to be finalised, the Council will consider the final plan, along with any other completed plans, in the 2004 NCP assessment. The Council notes Tasmania's view that, for other plans, the environmental water provisions being considered generally involve a lower level of risk than that accepted for the Great Forester catchment. The Council will report on progress by all jurisdictions with the implementation of environmental allocations in the 2004 NCP assessment, and conclude its assessment of jurisdictions' compliance with obligations in this area in 2005 consistent with the timetable established by CoAG.

7.3 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 Tasmania's water trading arrangements were in the early stages of development, particularly for permanent trade. The Council identified two specific constraints on trade.

- In unregulated water systems, until January 2003, a permanent transfer would not be permitted unless certain conditions were met (primarily that the transferring party had obtained financial advice on the effects of the transfer).
- In regulated systems, the Rivers and Water Supply Commission may refuse to approve a transfer if it is likely to result in the movement of water from irrigated agriculture to another purpose.

In addition, the Council noted that holders of irrigation rights in regulated systems must own land in the irrigation district or transfer their rights within six months of ceasing to own land. Tasmania was also in the process of developing water management plans including trading rules.

Tasmania needs to remove constraints on water trading or demonstrate that any remaining constraints are in the public interest. Tasmania also needs to ensure trading rules in water management 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

In Tasmania, water trading is permitted in both regulated and unregulated systems.

Regulated systems

Within formal irrigation districts, under the Irrigation Clauses Act irrigation rights are separated from land and transferable within the irrigation district. Transfers are subject to any conditions imposed by the administrator of the irrigation district.[8]

Irrigation rights can be leased for a period of time or sold outright. An application to trade must be made to the scheme operator and must comply

[8] A system of temporary trading in water rights has been operating in the Government-owned irrigation schemes since 1994-95. Owners of irrigation rights were able to transfer those rights to other users, in a particular season, with the approval of the Rivers and Water Supply Commission.

with conditions relating to the availability of water, infrastructure capabilities and the impact on the environment. If rights are to be traded out of an irrigation district, then the scheme operator would need to transfer a portion of its licence on behalf of the irrigator.

The trading rules applying in the three Government-owned irrigation districts (the South East, Cressy–Longford and Winnaleah irrigation schemes) are summarised in box 7.1. The Rivers and Water Supply Commission developed the rules in consultation with water users. The rules are intended to address the physical limits of scheme infrastructure, environmental constraints and the rights of third parties (other users and parties with a financial interest in an irrigation right).

Box 7.1: Trading rules in Tasmanian Government-owned irrigation districts

The Rivers and Water Supply Commission may refuse a proposed trade on the grounds that:

- supplying the water would have a significant negative effect on other users; or
- the commission cannot supply the water, given the capabilities of existing physical infrastructure or water availability.

The commission may require the preparation of a water development plan to ensure the sustainability of the proposed trade, with approval of the trade depending on the implementation of the plan.

Applications for trades incur administrative and registration fees. A fee also applies to recover the cost of any technical assessment of applications.

Applicants must provide evidence that any parties with a financial interest in an irrigation right, or the land to which it relates, approve of the trade.

The commission may refuse a transfer if it is likely to result in the movement of water from primarily irrigated agriculture to another purpose (a rule that ceased in May 2003).

Unregulated systems

For water resources outside formal irrigation districts, under the Water Management Act water licences (and allocations) are separated from land titles and transferable. Transfers are subject to the approval of the Minister for Primary Industries, Water and Environment.

- A licensee may transfer all or part of the water allocation on their water licence to another person. The transfer may be by permanent sale or temporary lease.[9]

[9] Temporary water transfers had been occurring for some time before the new arrangements in the Water Management Act. The transfers were undertaken through the issue of temporary water licences under the previous Act.

- The transfer must accord with any relevant water management plan or, where there is no plan, with the objectives of the Act. Water management plans may include trading rules.

- The Minister may refuse to approve a proposed transfer if the transfer would have a significant adverse impact on other water users or the environment. In addition, the Minister may refuse or modify a proposed transfer if, after the transfer, the quantity of water available to the receiving party would be in excess of the quantity that they could use sustainably, for the purpose for which it is intended, on the relevant land. The Minister may require an applicant for a transfer to pay for an assessment of the effect of granting that transfer.

- The consent of any person noted on the register of water licences as having an interest in the licence (for example, a mortgagee) must be obtained for a transfer of an allocation on a licence to be approved.

- If the receiving party does not hold a water licence, they must apply for a licence when applying to transfer the allocation. Pre-approval of these applications is possible.

Trading to date

At the time of the 2001 NCP assessment, water trading in Tasmania was at an early stage of development. Trade had been occurring since December 1998 within the three regulated Government-owned irrigation districts, which account for only around 10 per cent of the State's water use. Trade in unregulated areas had been occurring to only a small extent since being permitted in January 2000. There was little (if any) demand for trade between regulated and unregulated systems.

Based on the latest data provided by Tasmania, water trading (both permanent and temporary) in the Government-owned irrigation districts amounted to 10–15 per cent of water use in 2001-02. In the South East Irrigation Scheme, the proportion of water traded rose to 23 per cent in the first half of 2002-03 (table 7.2).

Table 7.2: Irrigation rights transferred in Tasmanian Government-owned irrigation schemes, 1999-2000 to 2002-03[a]

Scheme		*1999-2000*	*2000-01*	*2001-02*[b]	*2002-03 (to 31 January 2003)*
Cressy–Longford Irrigation Scheme	Water supplied (megalitres)	7 505	7 162	5 489	na
	No. of trades	13	8	7	na
	Water traded (megalitres)	850	373	550	na
	% water traded	11	5	10	na
South East Irrigation Scheme	Water supplied (megalitres)	3 537	4 293	1831	2 522
	No. of trades	63	48	15	25
	Water traded (megalitres)	677	394	241	572
	% water traded	19	11	13	23
Winnaleah Irrigation Scheme	Water supplied (megalitres)	3 546	3 507	3 523	2 611
	No. of trades	10	4	15	8
	Water traded (megalitres)	245	74	525	275
	% water traded	7	2	15	11

[a] Temporary trade accounts for the majority of this trade.

[b] For the Cressy–Longford scheme, data are for the period to 20 March 2002. The scheme was transferred to self-management on 1 April 2002.

na Not applicable.

Source: Government of Tasmania 2003.

For permanent transfers in unregulated streams, Tasmania advised that:

- over the 20-month period from July 2000 to February 2002, there were 151 permanent water transfers, accounting for a total volume of 48 579 megalitres; and
- in the 12 months to February 2003, there were 63 permanent transfers totalling 7677 megalitres (made up of 163 allocations).

While the volumes traded appear to be significant, Tasmania advised that the majority of permanent transfers were the result of property sales. In the 12 months to February 2003, for example, only around 30 allocations (or 20 per cent) were transferred outside property sales. Tasmania did not provide data on the permanent trading proportion of water use in unregulated streams.

In relation to temporary transfers in unregulated streams, Tasmania advised that:

- over the eight-month period from July 2001 to February 2002, there were 32 temporary transfers totalling 3670 megalitres; and
- in the 12 months to February 2003, there were three temporary transfers totalling 215 megalitres.

Tasmania expects the development of water management plans to provide for the expansion of trading arrangements as competition for water resources emerges.

Tasmania provided information on the time taken for water transfers to be approved.

- For Government-owned irrigation districts, the Rivers and Water Supply Commission approves transfers within seven days on average. Over 90 per cent of applications are approved within 14 days, with the longest approval taking around 30 days.
- For unregulated systems, the Department of Primary Industries, Water and Environment processes transfers within five working days where no third party interest is involved. Permanent water transfers involving a third party interest take longer but generally are approved within 14 days unless there are complications.

Changes in the regulatory environment since 2001

During 2002-03, Tasmania removed two restrictions on water trading that the Council had noted in the 2001 NCP assessment.

- For unregulated systems, the transitional provision on permanent transfers — requiring a proposed transferring party to certify in writing that they had obtained independent financial advice on the likely effects of the transfer — ceased as scheduled on 1 January 2003. The provision was intended as a temporary measure to provide time for the community to become familiar with water trading and its effects.
- For the Government-owned irrigation districts, the Rivers and Water Supply Commission's power to refuse a transfer of water if likely to result in the movement of water from irrigated agriculture to another purpose was removed in May 2003. The provision was intended to apply in circumstances such as the subdivision of irrigation properties and the use of water for domestic purposes. Tasmania advised that the power had been applied generally only in the relatively small South East Irrigation Scheme.

Tasmania advised that its first water management plan (the plan for the Great Forester catchment) was expected to be finalised and submitted to the Minister for adoption in mid-2003 (see section 7.2). It provided the Council with the penultimate draft of the plan (dated April 2003). The trading rules in the draft plan mirror the requirements of the Water Management Act. The draft plan notes that the Department of Primary Industries, Water and Environment will make summary trading information (on the number, volume and average price of trades) publicly available on an annual basis, subject to voluntary disclosure by applicants and the protection of personal details.

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. Since the 2001 NCP assessment, Tasmania has made significant progress towards achieving the CoAG water trading objectives.

During 2002-03, Tasmania removed two restrictions on water trading that the Council identified in 2001 as likely to be inconsistent with CoAG water trading commitments.

- In unregulated systems, the transitional provision that a permanent transfer would not be permitted unless certain conditions were met (primarily that the transferring party had obtained financial advice on the effects of the transfer) was sunsetted.

- For the Government-owned irrigation districts, the Rivers and Water Supply Commission's power to refuse a transfer of water if likely to result in the movement of water from irrigated agriculture to another purpose was removed.

While neither of these provisions prohibited water trade outright, their removal is likely to facilitate trade and maximise water's contribution to national income and welfare, consistent with CoAG objectives.

In addition, Tasmania has virtually completed the conversion of all former water rights (attached to land titles) to licences and allocations under the new legislation. This conversion removes a further constraint to trading.

Water market and trading administration does not appear to represent an impediment to trade. In the 2001 NCP assessment, the Council found that, while Tasmania's register of water rights does not provide indefeasibility or surety of title, water rights are sufficiently well defined so as not to provide an impediment to trade. In addition, transfers require the consent of all parties with a registered financial interest in the water right. Tasmania advised that trades are approved on average within seven days in Government-owned irrigation districts and within five to 14 days in

unregulated systems, depending on third party interests. Current approval processes are unlikely, therefore, to impede efficient trade.

Tasmania's trading arrangements also adequately address risks for the environment by requiring, for example, that transfers are consistent with the objectives of the water legislation and any relevant water management plan. The trading rules in the penultimate draft plan for the Great Forester catchment reiterate the requirements of the Water Management Act and do not appear to impose additional conditions on trade. The Council will consider the trading rules in the final plan for the Great Forester catchment in the 2004 NCP assessment. The Council will consider the trading rules in other water management plans in future NCP assessments as these are progressively finalised.

Having further considered Tasmania's trading arrangements and those in other States, the Council has identified a remaining restriction on trading in irrigation districts that is likely to be inconsistent with CoAG obligations. Only an owner or occupier of land in the district may hold 'irrigation rights' (the form of water entitlement in an irrigation district). A holder of an irrigation right who no longer owns or occupies land in the district must transfer the right within six months (with a possible extension of a further six months) or forfeit the right. Tasmania advised that this condition is intended to ensure water from publicly funded irrigation schemes is used for the purpose for which it was provided and to militate against speculation in the water market. The Council considers, however, that this restriction is also likely to affect the entry and activities of agents, brokers and other potential participants in the water trading market. As a result, the restriction may reduce returns available to holders of irrigation rights and constrain the extent to which water is used for its highest value purpose. The provision is therefore likely to constrain Tasmania's achievement of CoAG water reform objectives. Tasmanian Government officials indicated a preparedness to consider the continuing need for this restriction before the 2004 NCP assessment.

For unregulated systems, the Water Management Act includes a provision that appears to have similar objectives to the remaining restriction on trade in irrigation districts. Under the Act, the Minister may refuse or modify a proposed transfer if, after the transfer, the quantity of water available to the transferee would exceed: the quantity that could be used sustainably on the relevant land; or the quantity that could be used for the purpose for which it is intended. (This condition is reiterated in the draft water management plan for the Great Forester catchment.) In part, the provision could be used to reinforce other provisions aimed at environmental objectives. The Council considers, however, that the restriction is likely to have similar impacts — on the entry and activities of agents, brokers and other potential participants in the water trading market and on the returns available to licence holders — to the restriction on trade in irrigation districts.

In the 2001 NCP assessment, the Council also indicated concern with the limited choice of trading mechanisms and the availability of market information. While Tasmania advised that there have been no significant

developments in these areas since the 2001 NCP assessment, there are no Government impediments to the establishment of new trading mechanisms and the current arrangements are understandable given the level of trade.

Assessment

Tasmania made significant progress in addressing its water trading commitments in 2002-03. It removed the two restrictions on water trading identified by the Council in the 2001 NCP assessment as likely to be inconsistent with CoAG water trading commitments. The Council, therefore, considers that Tasmania has made sufficient progress against its CoAG obligations on water trading for the 2003 NCP assessment.

In relation to the remaining restriction on trading in irrigation districts that is likely to be inconsistent with CoAG obligations — that is, the requirement that only an owner or occupier of land in the district may hold irrigation rights — Tasmania indicated a preparedness to consider the continuing need for the measure. Given that the Water Management Act includes a provision applying to unregulated systems that appears to have similar objectives — with scope for transfers to be refused if the quantity of water available would exceed the amount that could be used sustainably for the intended purpose — the Council will look for Tasmania to consider the need for this provision at the same time.

For the 2004 NCP assessment, the Council will expect Tasmania to have reviewed the remaining restrictions on trading and either removed the restrictions or demonstrated that they provide a net public benefit. In future assessments, the Council will consider the efficacy of trading rules in water management plans as the plans are finalised. The Council will also monitor the choice of water trading mechanisms and the availability of market information, which are likely to develop as trading in water increases.

7.4 Institutional reform

Structural separation

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 2002 NCP assessment, the Council reiterated concerns with three areas of institutional reform in which Tasmania was still to address outstanding issues:

- transparency in local government water and wastewater service pricing arrangements, including reporting any remaining community service obligations and cross-subsidies;
- a complaints-handling process to address customer concerns with water service standards for local government water businesses; and
- the potential for conflicts of interest, given that the Minister for Primary Industries, Water and Environment is responsible for the Rivers and Water Supply Commission (the service provider) and for resource management and water allocations.

Tasmania needs to transparently report on pricing, including community service obligations and cross-subsidies, developments on complaints handling for customers of local government water businesses and arrangements for minimising potential conflicts between the various roles of the Minister.

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)

In the 2002 NCP assessment, the Council found that Tasmania was still to develop a complaints-handling process to address water service standard issues for customers of local government water businesses. It also reported concerns with the nature of Ministerial arrangements, given that the Minister for Primary Industries, Water and Environment is responsible for the Rivers and Water Supply Commission (the service provider) and for resource management and water allocations. The Council also raised questions about the transparency of water and wastewater pricing and related matters. At the time of the 2002 NCP assessment, Tasmania was proposing to develop a complaints-handling mechanism and service charter for local councils through the Premier's Local Government Council.

Reform progress

As reported in section 7.1, Tasmania's revised Urban Water and Wastewater Pricing Guidelines impose obligations on local governments that are consistent with the CoAG pricing principles, including the explicit reporting of CSOs and environmental costs incurred by water businesses. The guidelines also expect that local governments will measure (or reasonably estimate) water that they use themselves and pay for this use. The GPOC

audit of local government water and wastewater business performance reports on, among other things, compliance with the various aspects of the pricing guidelines, including costing and reporting CSOs, reporting own-use transfers, the structure of tariffs, and cross-subsidisation.

Tasmania clarified that many local governments have mechanisms for handling complaints and customers of local government water businesses have access to the Ombudsman. In addition, Tasmania advised that arrangements for the handling of complaints are now being considered as part of a wider review of the *Local Government Act 1993*. An issues paper, released in March 2003, indicates that the review is considering whether local governments should be required to adopt a formal complaints-handling procedure that has the confidence of their local communities. The review is also considering the case for establishing an independent complaints-handling body to deal with local government-related matters.

In relation to the potential conflicts for the Minister, Tasmania noted that in approving water management plans and water allocations the Minister is bound by specific requirements under the Water Management Act. The Rivers and Water Supply Commission must comply with the provisions of any relevant water management plan. As the portfolio Minister for the commission, the Minister is bound by the *Government Business Enterprises Act 1995*.

Submissions

The Tasmanian Conservation Trust considered that:

> *… the roles of water resource management, standards setting, regulatory enforcement and service provision are inextricably linked within the Tasmanian Government and heavily influenced by politics. Institutional separation is cosmetic at best. Debate is almost completely internalised, with little opportunity for community involvement.* (TCT 2003, p. 1)

The trust referred to developments regarding the Meander Dam to support its view, including:

- the Rivers and Water Supply Commission, based within the Department of Primary Industries, Water and Environment, is the proponent for the dam, but at various stages has been represented by (and shared information with) other units within the department;
- Hydro Tasmania's roles in the preparation of the development proposal and environmental management plan, and as the commercial operator of the mini-hydro scheme included in the project, further confuse the issue;

- the department's water development branch actively promoted the dam, while its environment division was responsible for assessing the dam's environmental impacts;

- the dam was approved by two statutory bodies that are based within the department (the Board of Environmental Management and Pollution Control and the Assessment Committee for Dam Construction) and both of these bodies have two senior manages from the department as members;

- the Board of Environmental Management and Pollution Control delegated final approval of the dam to its chairman, who is also the department's secretary; and

- during this process, the Minister for Primary Industries, Water and Environment made public statements supporting the dam.

The trust considered that the overturning of the permit for the dam by the Resource Management and Planning Appeal Tribunal raises serious questions about the department's capacity to both promote and assess water infrastructure proposals.

Discussion and assessment

Tasmania has addressed the matters raised in the 2002 NCP assessment concerning transparency in local government water and wastewater service pricing. The State's revised pricing guidelines impose obligations on local governments that are consistent with the CoAG pricing principles, including the explicit reporting of CSOs and local governments' own-use of water. The urban water and wastewater pricing and other guidelines, together with the annual GPOC audit, provide detailed financial performance feedback to local government water and wastewater providers and advice on areas of weakness and actions necessary to improve performance. This advice will assist in making transparent many of the cross-subsidies that exist in local government charging regimes although nontransparent cross-subsidies will remain where local governments do not charge on a use-base.

The Council notes the clarification provided by Tasmania of its processes for handling customer concerns about water service issues. Tasmania advised that many local governments have mechanisms for handling complaints, customers of local government water businesses have access to the Ombudsman, and complaints-handling processes are being reviewed as part of the wider review of the Local Government Act. The Council will await the outcome of the review before further considering the adequacy of complaints-handling processes for addressing concerns with the standards of service of local government water and wastewater businesses.

In response to the issues raised by the Tasmanian Conservation Trust, the Tasmanian Government advised the following.

- The Rivers and Water Supply Commission is a Government business enterprise subject to the Government Business Enterprises Act. It is a separate legal entity from the department. The department provides some administrative services for the commission under a commercial service agreement.

- The department's water resources division managed the information-gathering consultancies and the subsequent preparation of the development proposal and environmental management plan, as the commission did not have sufficient resources to undertake all of the work in a cost-effective manner.

- The Assessment Committee for Dam Construction is an independent, expertise-based, statutory committee. It has six members, three of which are not nominated by the Minister. Under the Water Management Act, the committee is not subject to the control or direction of the Minister when approving or refusing an application for a permit.

- The Environmental Management and Pollution Control Board is also an independent statutory body. It has five members: the department's secretary (as chair) and director of environmental management, and three persons with practical knowledge and experience in environmental management and/or conservation.

- The board's assessment of the Meander Dam proposal covered all relevant matters, including environmental impacts and mitigation strategies, dam safety, project economics and water management issues. The assessment involved a six-week period for public submissions. The proponent was then required to provide supplementary information to address the matters raised in submissions.

- The decision to issue an environmental protection notice (including the conditions attached to the notice) was determined by a formal meeting of the board. The board agreed to some amendments to the draft notice presented at the meeting and delegated the final signing of the notice to the chairman once these amendments had been made.

The additional information provided by Tasmania indicates that the Rivers and Water Supply Commission, the Assessment Committee for Dam Construction and the Environmental Management and Pollution Control Board are effectively separate legal entities from the department and must comply with their own specific legislative requirements. Departmental representatives do not comprise a majority on either the Assessment Committee for Dam Construction or the Environmental Management and Pollution Control Board. In addition, Tasmania has confirmed that the final decision on the environment protection notice was made by the board and not by the department's secretary.

In relation to potential Ministerial conflicts, Tasmania emphasised that in approving water management plans and water allocations the Minister must comply with the Water Management Act. As the portfolio Minister for the

Rivers and Water Supply Commission, the Minister is bound by the Government Business Enterprises Act.

The Council considers that Tasmania's Ministerial and institutional arrangements provide adequate safeguards and, for a small jurisdiction, are consistent with CoAG obligations. The Council will, however, continue to monitor outcomes in future NCP assessments.

Devolution of irrigation scheme management

Assessment issue: Constituents are to be given a greater degree of responsibility in the management of irrigation areas, for example, through devolution of operational responsibility to local bodies, subject to appropriate regulatory frameworks being established.

In the 2002 NCP assessment, the Council reported that Tasmania had transferred responsibility for the management of one of the three Government-owned irrigation schemes (the Cressy–Longford Irrigation Scheme) to local irrigators and was progressing devolution for the Winnaleah Irrigation Scheme. Tasmania expected negotiations on devolution for the South East Irrigation Scheme to commence once the transfer of the Winnaleah scheme was finalised.

Tasmania should report on progress in devolving responsibility for the management of the Winnaleah and South East irrigation schemes.

Next full assessment: The Council will consider Tasmania's progress with devolving management responsibility in the South East Irrigation Scheme in the 2004 NCP assessment. The Council will assess Tasmania's progress with institutional reform in 2005 as part of a full assessment across the entire package of water reforms.

Reference: CoAG water reform agreement, clause 6(g)

In the 2002 NCP assessment, the Council reported that Tasmania had transferred responsibility for the management of one of the three Government-owned irrigation schemes (the Cressy–Longford scheme) to the local irrigators association in April 2002. It was also progressing the devolution of management for the Winnaleah scheme, though the process had been delayed pending resolution of the tax status of the Cressy–Longford scheme. In the expectation that arrangements for the transfer would be finalised, irrigators appointed new scheme managers for the Winnaleah scheme in September 2001. Tasmania expected negotiations with irrigators in the South East scheme to commence once the transfer of the Winnaleah scheme was settled.

Tasmania transferred responsibility for the management of the Winnaleah Irrigation Scheme to local irrigators on 1 July 2003. The transfer was made on a similar basis to that for the Cressy–Longford scheme. The Rivers and Water Supply Commission retains ownership of the fixed assets (for water delivery and water storage). The Winnaleah irrigators are responsible for day-to-day scheme operations, administration and management (including price setting and staff management) and own the operational assets.

Tasmania advised that discussions on the devolution of management responsibility for the South East Irrigation Scheme had commenced, but the timing of the devolution for the scheme is unclear. The scheme has more complex operational arrangements and there are several pricing issues to be resolved. These issues are currently being negotiated with local irrigators. The Government is providing relevant information to irrigators to assist the process.

Discussion and assessment

The Council is satisfied that Tasmania continues to meet its CoAG obligations on the devolution of irrigation scheme management for this 2003 NCP assessment. It will consider Tasmania's progress with devolving management responsibility in the South East Irrigation Scheme in the 2004 NCP assessment.

Integrated catchment management

Assessment issue: Tasmania 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 noted that Tasmania was revising its administrative arrangements for integrated catchment management. In 2002, the Council reviewed Tasmania's progress in implementing its Natural Resource Management Framework and considered that the Government was satisfactorily progressing its integrated catchment management obligations.

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)

Tasmania is implementing integrated catchment management reform under its Natural Resource Management Framework. The framework sets out principles and priorities in natural resource management and integrates statutory and nonstatutory instruments at State and regional levels. Tasmania completed the framework in February 2002 following extensive public consultation with stakeholders. The framework is available on the Department of Primary Industries, Water and Environment web site (www.dpiwe.tas.gov.au).

The Tasmanian framework is consistent with the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust extension.[10] Tasmania signed a bilateral agreement with the Commonwealth Government to implement the national action plan in February 2002, and the Natural Heritage Trust extension in June 2003. Consistent with these agreements, the focus of the Tasmanian framework is planning on a regional basis rather than a catchment basis.

The Natural Resource Management Framework sits within Tasmania's Resource Management and Planning System, which was established in 1993 for the statutory and administrative coordination of natural resource management. Supported by a suite of complementary legislation (including the *Water Management Act 1999*), the system establishes a whole-of-government, industry and community approach to resource management and planning.

The *Natural Resource Management Act 2002* implements the Natural Resource Management Framework. The Act, which was passed in November 2002, establishes:

- the Tasmanian Natural Resource Management Council;
- regional natural resource management committees; and
- mechanisms to accredit regional strategies.

The Natural Resource Management Council, which first met in March 2003, advises the Government on natural resource management priorities, the accreditation of regional strategies, the effectiveness of implementation and funding arrangements. It also establishes communication mechanisms with regional bodies and among stakeholders.

Three regional committees[11] under the council identify regional priorities and prepare and monitor statutory natural resource management strategies. The committees, which were established in December 2002, undertake this work in conjunction with local communities, including local catchment groups. The committees are intended to link State and local natural resource management priorities.

Accredited regional strategies must include standards and targets that are consistent with the National Framework for Natural Resource Management

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[10] The Commonwealth Government extended the Natural Heritage Trust to 2006-07 in the May 2001 Budget. The implementation framework was endorsed in October 2002 by the Natural Resource Management Ministerial Council and State, Territory and Commonwealth Ministers. A significant focus is on measures to improve water quality.

[11] Tasmania's three natural resource management regions are the North-West, Northern and Southern regions.

Standards and Targets 2002, and must meet accreditation criteria agreed by the Natural Resource Management Ministerial Council. In particular, regional strategies must set targets on a range of nationally agreed matters and monitor progress against those targets. The targets are being developed in consultation with the community.

In developing their strategies, the regional committees are drawing on pre-existing work in catchment planning that took place with assistance from the Department of Primary Industries, Water and Environment. Tasmania reported in 2001 that 28 catchment and subregional groups were developing or implementing catchment and natural resource management plans.[12] While the Natural Resource Management Framework adopts a regional focus (under the regional committees) rather than a narrower catchment focus, the 28 catchment groups continue to play a significant role in the development and delivery of the regional strategies. In particular, the catchment groups provide subregional input into the regional strategies, and in the future, will submit and implement projects at the regional, subregional and catchment levels.

Tasmania reported in 2002 that it anticipated developing three regional strategies under the Natural Resource Management Act by around the end of August 2003. However, the Act was delayed by the 2002 Tasmanian election, and the regional strategies are now due to be submitted for accreditation in March 2004. Tasmania advised in 2003 that the regional committees have each produced a regional situation paper as the first stage in the development of their strategies, and are now preparing material for community consultation.

Tasmania's natural resource management arrangements provide for some coordination between water quality and water quantity management. Water management plans and regional natural resource management strategies are developed under separate Acts that sit beneath the Resource Management and Planning System — the overarching Statewide framework for implementing sustainable development. While there is no direct statutory link between the plans and the strategies, the requirements of the Resource Management and Planning System mean that regional strategy actions pertaining to water management activities are primarily implemented via water management plans (where such plans exist).[13]

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[12] The Mersey group, for example, produced the Mersey Natural Resource Management Plan and Mersey Rivercare Plan, which were the basis for a devolved grant that provided funding to groups and individuals for on-ground works for river, riparian, soil and vegetation management.

[13] Other links between water quantity and water quality management include the application of protected environmental values and State of River reporting (see the section on 'National Water Quality Management Strategy.')

Salinity

The National Land and Water Resource Audit's 2000 salinity assessment estimated that dryland salinity is placing 54 000 hectares of the State at risk and may cost farm industries A$5.4 million per year. The audit also found that some groundwater bores and streams have excessive salinity levels. The area at risk is expected to rise to 94 000 hectares by 2050. The Derwent Valley, the Midlands, the North East, the East Coast and the Bass Strait Islands are the areas identified as being most vulnerable to salinity (NLWRA 2001).

Tasmania proposes to address salinity issues through the regional natural resource management committees, which will identify those areas requiring salinity management as a basis for developing management strategies. Consistent with the national action plan (and the Natural Heritage Trust extension, for regions outside the national action plan priority regions), the strategies will set and monitor targets on nationally agreed matters.

Other measures

Beyond the development (and eventual implementation) of regional natural resource management strategies, Tasmania's approach to integrated catchment management also encompasses:

- land care practices to protect rivers with high environmental values;
- the State Water Quality Strategy; and
- State of River reports.

The Council considers land care practices in the following section. The State Water Quality Strategy and State of River reporting are examined in the context of Tasmania's implementation of the National Water Quality Management Strategy (see section 7.5).

Land care practices

Tasmania initiated projects from 2000 to address property-based land care issues identified in catchment plans. Work to address these issues includes fencing, flood mitigation, the rehabilitation of native vegetation, and riverworks. Individual farmers undertook this work with Natural Heritage Trust funding. Tasmania reported in 2001 that 36 river care plans had been completed, while another 47 were approved or under development. Nine weed management plans were also in development. Tasmania expects that many of these plans will be used as the basis for delivering on-ground action as part of the implementation of the regional strategies.

In addition, the State Policy on Water Quality Management addresses a range of land care issues, including the control of erosion and stormwater runoff, agricultural runoff and forestry operations. These land care provisions protect rivers and streams.

The State policy also advocates using the planning system and developing a code of practice to reduce the effects of development activities on waterways. Action is under way to ensure that planning schemes contain the appropriate provisions. The Hobart metropolitan councils and Launceston City Council, for example, developed best practice guidelines for the control of erosion and stormwater runoff from land disturbance. The guidelines describe best practice environmental management to minimise contaminated runoff from construction sites, subdivisions, civil infrastructure and road works, and include measures to protect streamside vegetation. In relation to agricultural runoff, the State policy requires the development of a code of practice or guidelines to reduce the impact of stormwater runoff from agricultural land on water quality.

The Department of Primary Industries, Water and Environment, jointly with the Tasmanian Farmers and Graziers Association completed a Natural Heritage Trust-funded project titled Guidelines for Good Agricultural Land Practice in Tasmania. The aim of the project was to develop guidelines for good agricultural land practice to improve soil, water and vegetation management, and to reduce the impact of agriculture on Tasmania's land and water resources. Specific guidelines address the impact on water quality of stormwater runoff from agricultural land. The completed guidelines were distributed to members of the Tasmanian Farmers and Graziers Association and other interested farmers. Tasmania also has a code of practice relating to private and public forestry land. The code was amended in 2001 and 2002 to tighten restrictions on the clearing of forest trees.

Support for catchment management

Tasmania has a number of supports to facilitate catchment management. These include:

- a guide for community groups, titled *Integrated catchment management: what it is and how to do it*; and

- Landcare, Rivercare and Bushcare program teams to help groups deal with technical issues arising from their catchment management projects.

Submissions

The Tasmanian Conservation Trust criticised Tasmania's implementation of integrated catchment reforms (TCT 2003, p. 2). The trust's key criticisms are that the scope of reform is limited, the pace of reform is too slow, and the Government is predisposed to facilitating development at the expense of environmental values. According to the Tasmanian Conservation Trust:

> *With the exception of community driven,* [Natural Heritage Trust] *funded plans such as for the Brid-Forester Integrated Catchment Management Plan, there has been very little focus on* [integrated catchment management] *in Tasmania in recent years …*
>
> *Natural Resource Management is running seriously behind schedule in Tasmania. The three regional councils have only been established a few months, and the likelihood of regional strategies being delivered prior to the end of 2003 is very low.* (TCT 2003, p. 2)

On the promotion of development at the expense of environmental considerations, the Tasmanian Conservation Trust stated that:

> *The focus of Tasmanian Government policy is purely and solely directed at resource development, and water is no exception. The Water Development Plan (WDP), which is focussed almost entirely on the development of large water storages, has taken the lion's share of both funding and resources in recent years. With the exception of the Conservation of Freshwater Ecosystem Values Project, which is beginning to look undeliverable, there has been no counter to this. For example, despite promoting over 150 gigalitres of increased water storage for the sole purpose of irrigation, there has been no assessment of the potential increase in salinity impacts as a result of the WDP.* (TCT 2003, p. 2)

The trust considered that public consultation and education are 'reasonably comprehensive' in this reform area, but that 'details have often been vague.' It argued that an exception is Tasmania's nomination of priority projects under the national action plan:

> *The Tasmanian Conservation Trust has been forced to raise serious procedural and eligibility concerns with the Federal Minister with regards to the projects put forward by the Tasmanian Government as* [national action plan] *priority projects. Our primary concern is the fact that these projects were developed within the Water Development Branch of the* [Department of Primary Industries, Water and Environment]*, with no community consultation or input. This is contrary to both the spirit and the intent of the* [national action plan]*. The* [Tasmanian Conservation Trust] *also believes that the majority of these nominated projects are not priority proposals, and that the Water Development Branch is attempting to avoid any scrutiny of its own*

> *activities, particularly the potential increase in salinity impacts due to massive increases in irrigation.* (TCT 2003, p. 2)

Tasmania advised that national action plan priority projects are not water development projects. The Government stated that the priority projects were not developed by the Water Development Branch, but by the Water Assessment and Planning Branch and the Water Management Branch. Tasmania advised that the State's priority projects encompass baseline information and monitoring as well as conservation projects, and that relevant processes and accreditation criteria account for salinity issues. Tasmania further advised that the priority projects referred to by the Tasmanian Conservation Trust were endorsed by the relevant natural resource management regional committees.

Discussion and assessment

Since the 2001 NCP assessment, Tasmania appears to have focused on establishing an administrative framework to implement integrated catchment management. Tasmania enacted the Natural Resource Management Act in November 2002, and established the Tasmanian Natural Resource Management Council in February 2003. Tasmania developed its Natural Resource Management Framework to reflect the requirements of the national action plan and Natural Heritage Trust extension, including observance of the National Framework for Natural Resource Management Standards and Targets 2002. The framework facilitates consideration of, and support for, land care practices to protect rivers with high environmental values.

Tasmania signed an intergovernmental partnership agreement with the Commonwealth Government to implement integrated catchment management reforms in priority catchments as part of the national action plan. This approach is consistent with Tasmania's NCP obligations to implement integrated catchment management reform. Tasmania will continue to develop integrated catchment management arrangements in the context of the national action plan and under the Natural Heritage Trust extension.

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

- developed administrative arrangements and decision-making processes to ensure an integrated approach to natural resource management; and
- 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.

While refining the administrative framework was a substantial task and sets the groundwork for the State's catchment management work, catchment management activity appears relatively limited. The three regional natural resource management committees have commenced their work, but the regional strategies, which were to have been in place by mid-2003, will not be developed until early 2004. In addition, Tasmania's progress in determining environmental water provisions (water to be preserved for the environment) is slower than Tasmania originally anticipated (see section 7.2). At 30 June 2003, only one of 14 water management plans was nearing completion.

The Council will consider Tasmania's progress in implementing regional natural resource management strategies in the 2005 NCP assessment. The Council will look for Tasmania to have significantly advanced its catchment management activity.

7.5 National Water Quality Management Strategy

Assessment issue: Tasmania 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 Tasmania was meeting its 2001 obligations on the NWQMS.

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 (d)

Tasmania implements the NWQMS through its State Policy on Water Quality Management 1997. The policy assists in the management of water resources, decisions on water quality, sewerage and drainage services, and the coordination of government strategies. It applies to both surface water and groundwater. It implements the NWQMS in Tasmania by:

- adopting the broad objectives and structure of the NWQMS;
- developing water quality objectives through a consultative approach;
- addressing point source pollution through policies based on the NWQMS model;
- adopting NWQMS strategies to deal with major sources of diffuse pollution;

- adopting the waste minimisation hierarchy in the NWQMS;
- dealing with groundwater issues in accord with the NWQMS; and
- adopting or referring to guidelines produced under the NWQMS, including the Australian Water Quality Guidelines (NWQMS paper no. 6) and the Guidelines for Urban Stormwater Management (NWQMS paper no. 10). Tasmania has developed draft guidelines to implement several NWQMS modules, and additional guidelines are being developed.

Protected environmental values

The State Policy on Water Quality Management:

- sets environmental values that are required to be protected (protected environmental values) for Tasmania's fresh and estuarine surface waters;[14]
- determines water quality targets, based on the best scientific information available, of the level of indicators that should be met to protect these values; and
- sets water quality objectives for specific bodies of water as the most stringent set of water quality guidelines that should be met to achieve all of the protected environmental values nominated for that body of water.

Tasmania's protected environmental values are set either on a catchment basis or by municipal areas. The Board of Environmental Management and Pollution Control sets the values and water quality objectives through a community consultation process coordinated by the Department of Primary Industries, Water and Environment. Participants include local government authorities, regional water management bodies, planning authorities and community representatives (NCC 2001g, pp. 103–4). The public process, which takes at least three months, includes workshops, public discussion papers, public meetings and submissions.

Tasmania reported in 2001 that values had been set for nearly 75 per cent of the State's surface waters. At the date of the 2003 NCP assessment, community consultation on values for all surface waters had been completed, although a few local governments had not endorsed the values for their municipal areas.

Tasmania is developing water quality objectives for catchments on an 'as needs basis' to help control emissions from heavy industry. The approach is consistent with that outlined in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (NWQMS paper no. 4). The State

[14] The policy is being amended to eventually extend to coastal and ground waters.

has run pilot schemes in several catchments to determine water quality targets and interim water quality objectives on a site specific basis. The targets and objectives will be finalised through public consultation in the development of regional natural resource management strategies (see the discussion on integrated catchment management in section 7.4). Tasmania adopts the default values in NWQMS paper no. 4 where site specific information is inadequate.

Processes for considering water quality values have become more closely integrated with processes for determining water quantity values. In particular, protected environmental values and water quality objectives are considered in setting water allocations (including environmental allocations) for the State's water resources. The Department of Primary Industries, Water and Environment is developing statutory water management plans to determine future water allocations for water courses, lakes and groundwater areas. Each plan must include an assessment of the likely impacts of water allocations on protected environmental values and water quality objectives. In effect, the environmental flow is the stream flow required to ensure that the values and objectives are not compromised. In this way, water allocations can account for community-developed protected environmental values, water quality objectives and other water values (including ecosystem values, consumptive and nonconsumptive use values, recreation values, aesthetic values and physical landscape values). The first water management plan, for the Great Forester River, is nearing completion.

In areas where there is no water management plan, the Director of Environmental Management may issue an Environment Protection Notice under the Act to ensure protected environmental values and environmental objectives are met by the Department of Primary Industries, Water and Environment.

State Water Quality Monitoring Strategy

The National Land and Water Resource Audit reported that water quality datasets for Tasmania did not meet minimum requirements in terms of sampling frequency and length of monitoring recorded to enable a comparison of surface water quality against the 1992 Australian and New Zealand Guidelines for Fresh and Marine Water Quality (NLWRA 2001).

The Tasmanian Government approved the State Water Quality Monitoring Strategy in March 2003 to address issues in the collection of water quality information. The Government is developing an implementation strategy that will include an extension of the baseline water quality monitoring network and wider use of State of Rivers reporting (see below), each of which is consistent with approaches outlined in NWQMS paper no. 4. Consistent with the strategy, Tasmania committed A$500 000 in 2001-02 to establish continuous water quality and quantity monitoring sites around the State. The chosen sites provide the basis for regular indicator reporting and on-ground management decisions. Work under this program is largely complete. The

strategy recognises the Government's need to improve partnerships in monitoring and reporting of water quality information, work more closely with Waterwatch as a key community group, and organise and improve access to data within a single State database and via the Internet.

Tasmania reported that its current monitoring programs are consistent with the Australian Guidelines for Water Quality Monitoring and Reporting (NWQMS paper no. 7). The national guidelines will form part of the State Water Quality Monitoring Strategy.

State of River reporting

The Department of Primary Industries, Water and Environment publishes catchment-based State of River reports to provide information on water quality, aquatic health, water use and allocations, and river condition in catchments. The studies are designed to integrate physical, chemical and biological monitoring at appropriate time and space scales as recommended by NWQMS paper no. 4. In particular, the studies provide a snapshot of current conditions, which will allow the identification of trends in natural resource condition over time.[15] Tasmania expects to complete State of River reports once every 10 years. The Government advised in 2003 that seven reports had been completed, with a further six reports to be completed by September 2003. The reports are available from www.dpiwe.tas.gov.au.

Tasmania determines priorities for undertaking State of River reports from a weighting of water quality and water management priorities within an 'impact matrix' used to assess environmental flow priorities. Priorities also depend on community interest and participation. The impetus for some reports arose from local councils and natural resource management groups.

State of River reports provide information for water management and catchment management planning. They also provide input for water quality monitoring under the State Water Quality Management Strategy (see above). In this sense, State of River reporting provides another link between the State's water quality and water quantity management processes.

[15] To identify trends in natural resource degradation, Tasmania is expanding the baseline water quality network to provide information between reports. This is in accord with priorities outlined in the State Water Quality Monitoring Strategy.

Drinking water

Tasmania formally adopted the Australian Drinking Water Guidelines 1996 (NWQMS paper no. 6) under the *Public Health Act 1997,* which provides specific quality parameters to assess acceptable drinking water standards. The Tasmanian Water Quality Guidelines 1997, published by the Department of Health and Human Services, specify public health standards for drinking and recreational water quality. The Tasmanian guidelines refer to the 1996 Australian Drinking Water Guidelines.

The Director of Public Health is required under the Public Health Act to publish an Annual Drinking Water Quality Report, including an assessment of the individual performance of every water supply authority against the relevant performance parameters set out in the guidelines. The Director published the 2001-2002 report in July 2003.

The State Policy on Water Quality Management also requires that water quality objectives be set with reference to 'guidelines recommended by the National Health and Medical Research Council, unless otherwise specified by the Director of Health'. Tasmania reported that this requirement refers to NWQMS paper no. 6.

The Water Services Association of Australia reported that Hobart Water complies with the 1996 Australian Drinking Water Guidelines for bacteriological standards, but not with those for physical-chemical guidelines (WSAA 2003, p.18).[16] The Department of Health and Human Services advised that Hobart Water reports above and beyond the State reporting requirements for drinking water quality. The Department noted that while NWQMS paper no. 6 requires percentage compliance for microbiological quality parameters, it does not require percentage compliance reporting for the following physical-chemical guidelines: pH, colour and turbidity levels.

Wastewater management

Several measures, including the State Water Quality Management Policy, are in place to manage wastewater in Tasmania. These measures cover wastewater discharges, the removal of existing discharges from waterways and the promotion of the re-use of wastewater.

[16] In 2001–02, 75 per cent of Hobart Water samples met the pH compliance range of 6.5–8.5. Of the noncompliant samples, 92 per cent were below pH 6.5. With respect to turbidity, Hobart Water had 100 per cent compliance with NWQMS paper no. 6, and 90 per cent compliance with Hobart Water's internal guidelines.

Tasmania has published emission limit guidelines for:

- sewage treatment plants that discharge pollutants into fresh and marine waters (2001);
- meat premises and pet food works (2001);
- intensive animal husbandry activities (2001); and
- fruit and vegetable processing activities (2002).

The Government finalised environmental guidelines for the re-use of recycled water in December 2002. Consistent with the State Policy on Water Quality Management, the Government endorsed environmental best practice guidelines for undertaking works in waterways and wetlands in March 2003.

For the period 1999–2003, Tasmania used funding through the Natural Heritage Trust to upgrade sewage treatment lagoons.[17] The project (the Clean Quality Water Program) is managed by the Department of Primary Industries, Water and Environment and aims to ensure lagoon effluent is suitable for direct re-use for irrigation or, where this is not feasible, for disposal to rivers with insignificant environmental impact.

From 1999, the Tasmanian Government provided funding under its Clean Quality Water Program to local governments for capital works for sewage lagoon upgrades and re-use schemes. To March 2001, A$3.5 million was allocated for 15 projects. From April 2001 to March 2003, a further 11 projects were funded, totalling A$3.2 million. Tasmania expects these projects to significantly reduce harmful discharges into inland waters.

Tasmania co-authored NWQMS paper no. 15: *Guidelines for Sewerage Systems – Sewerage System Overflows*, based on the State Sewage Pumping Station Environmental Guidelines 1999. The national approach is therefore reflected in the State guidelines.

Tasmania also made some progress on stormwater management. It recently completed a draft five-year stormwater management strategy and a model stormwater management plan for the Derwent Estuary Program (NWQMS paper no. 10). The stormwater management model is intended to assist regional natural resource management committees in planning and implementing regional strategies (see also the section on 'land care' under 'integrated catchment management').

[17] Sewage treatment lagoons are the most common method of sewage treatment in Tasmania. Discharges from the lagoons are among the main sources of point source pollution for inland rivers.

Discussion and assessment

Tasmania has made further progress in implementing the NWQMS framework. Significant developments since the 2001 NCP assessment include:

- the completion of the State Water Quality Monitoring Strategy in 2003;
- the setting of protected environmental values for most of the State's catchments, and pilot schemes to set water quality objectives;
- further work on State of River reporting;
- the establishment of links between water quantity and water quality issues in water management plans and State of River reporting; and
- the implementation of wastewater and stormwater management strategies.

The Council considers that Tasmania made satisfactory progress for the 2003 NCP assessment in implementing policies that reflect the NWQMS guidelines. The Council will consider Tasmania's progress in the development of water quality objectives and implementation of the State Water Quality Monitoring Strategy in the 2005 NCP assessment.

7.6 Water legislation review and reform

Assessment issue: Tasmania is to have reviewed and, where appropriate, reformed all water industry 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. In the 2002 NCP assessment, the Council noted that Tasmania had proclaimed new water industry legislation.

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

Reference: Competition Principles Agreement, clause 5

Tasmania proclaimed new water management legislation on 1 January 2000. The *Water Management Act 1999* replaced the *Water Act 1957* and the *Groundwater Act 1985*, and amended or replaced 12 other Acts covering the allocation of water resources in the State. The new water management legislation governs the manner in which access to, and use of, the State's water resources are regulated. In particular, the Water Management Act:

- establishes new institutional arrangements for water management in Tasmania including the develoment of water management plans that allocate water for extractive uses and for the environment (see section 7.2);

- provides for consistent water licensing arrangements for all types of users, including the establishment of special licences major users such as Hydro Tasmania and the Wesley Vale Pulp Mill (see section 7.2);

- facilitates trading in water entitlements (see section 7.3);

- establishes a new system of dealing with applications for dam construction (see section 7.7); and

- creates water districts.

The Water Management Act includes a provision applying to unregulated systems that allows transfers of water entitlements to be refused if the quantity of water exceeds the amount that could be used sustainably for the intended purpose. The Irrigation Clauses Act (as amended in 1997 and 2001) imposes a requirement that appears to have a similar objective — only an owner or occupier of land in the district, or a person who may hold land in the district, may hold irrigation rights. As discussed in section 7.3, these provisions are likely to affect the development of the water trading market by limiting the activities of agents, brokers and other potential participants in the market, and as a result, may reduce returns available to holders of irrigation rights and constrain the extent to which water is used for its highest value purpose.

Assessment

The Council considers Tasmania has completed all obligations under the Competition Principles Agreement in relation to the review and reform of the stock of water industry legislation. For the 2004 NCP assessment, the Council will look for Tasmania to consider the need for provisions in the Water Management Act and the Irrigation Clauses Act that may impinge on the development of water trading.

7.7 Investments in new rural water schemes

Assessment issue: Investments in new rural water schemes or extensions to existing schemes are to be undertaken only after appraisal indicates the scheme or extension is economically viable and ecologically sustainable.

In 2001, the Tasmanian Government announced an intention to proceed with the design of the Meander Dam project. The 2002 NCP assessment reported that the feasibility study commissioned by Tasmania had concluded there were good prospects for the scheme proving to be financially viable, though the proposed funding model included Government contributions. At the time of the 2002 NCP assessment, an application for a permit to commence construction of the dam was being assessed under Tasmania's statutory processes. The development proposal had also been designated a controlled activity under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999*.

Tasmania will need to demonstrate that the Meander Dam project satisfies the CoAG tests of economic viability and ecological sustainability before the project proceeds.

Next full assessment: The Council will examine investments made by the Government when the Government decides to proceed, to ensure that it has demonstrated that the project meets the tests of economic viability and ecological sustainability.

Reference: CoAG water reform agreement, clause 3(d)(iii)

In 2001, the Tasmanian Government announced an intention to proceed with the design of the Meander Dam project, 50 kilometres south west of Launceston. Water from the 43-gigalitre dam would be used primarily to increase the quantity and surety of irrigation water in the region. A mini hydroelectric power plant, connected to the State grid, is also proposed to operate at the site. The Tasmanian (A$7 million) and Commonwealth governments (A$2.6 million) are to contribute funding for the project.

As reported in the 2002 NCP assessment, a feasibility study conducted by Davey and Maynard Agricultural Consulting, Deloitte Touche Tohmatsu and Serve-Ag Pty Ltd for the Department of Primary Industries, Water and Environment was released in March 2002 (Davey and Maynard et al 2002). The study concluded there were good prospects for the scheme proving to be financially viable. This was based on an anticipated capital cost of around A$30 million and a proposed funding model including the Government contributions (which may need to be provided with no return), an electricity generator and one or more private investors.

At the time of the 2002 NCP assessment, the Tasmanian Government was assessing an application for a permit to commence construction of the Meander Dam under the statutory processes of the Water Management Act and the *Environmental Management and Pollution Control Act 1994*. The development proposal had also been designated a controlled activity under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* on the grounds of potential impacts on listed threatened species and communities, particularly the spotted tailed quoll and the plant species *Epacris aff. exserta*. Work was underway to identify ways of minimising the impact on threatened species and to develop plans for the species' recovery.

Developments since 2002

As a follow up to the March 2002 feasibility study, the Department of Primary Industries, Water and Environment commissioned Davey and Maynard Agricultural Consulting to undertake an economic evaluation of the project. The consultants provided a draft economic evaluation in December 2002 (Davey and Maynard 2002). The draft evaluation concluded that the project would have a positive net present value estimated at A$30.4 million (at a 6 per cent real discount rate). Apart from the project's more direct costs and revenues, the evaluation included an estimate of A$200 000 per year as benefits from flood mitigation, improved water quality and recreational value. In terms of environmental costs, the evaluation noted that some mitigation of impacts was included in the cost estimates for dam construction and operations. The study also reported an alternative methodology which considered a narrower range of costs and benefits (excluding, for example, on-farm capital costs and the mini hydroelectricity plant) and focusing on the net benefit accruing from each particular use of the water. This approach resulted in a lower, but still positive, estimated net economic benefit of A$9.6 million.

In late 2002, Tasmania's Director of Environmental Management issued an environment protection notice enabling the dam to proceed (subject to conditions) and the Assessment Committee for Dam Construction issued a permit for the dam. The environment protection notice includes requirements for mitigation measures to be put in place to reduce the impact on the quoll and *Epacris* species. The notice requires, for example, preparation of a fauna habitat management plan, including the preservation or creation of an equivalent habitat (in terms of area and quality) for the quolls near the dam. It also requires preparation of a program to protect the known *Epacris* populations in the Meander and Mersey regions.

In January 2003, however, Tasmania's Resource Management and Planning Appeal Tribunal set aside the dam permit and environment protection notice following an appeal by the Tasmanian Conservation Trust and a private party. In reaching its decision, the tribunal commented on both the economic and environmental impacts of the project.

- The dam would create economic benefits ranging from below zero to around A$39.4 million in net present value terms, though 'it is a matter of speculation as to where in that range the result would lie'.

- To the extent that benefits would flow, these would be achieved at the cost of substantial adverse impacts upon both the quoll and *Epacris* species. Based on the evidence before it, the tribunal considered there was no apparent means of avoiding, or substantially mitigating, the impacts on the *Epacris* species and that it was uncertain whether reasonable mitigation of the impact on the quoll species could be achieved. As a result, the tribunal was not satisfied that the conditions in the environment protection notice would be likely to achieve their objectives.

- The Tribunal concluded that 'the certain and further likely environmental harm arising from construction of and the existence of the dam clearly outweigh the less certain benefits' (RMPAT 2003, paragraph 49).

The Tasmanian Government subsequently introduced legislation to overcome the tribunal's decision and permit construction of the dam. The *Meander Dam Project Act 2003*, passed in April 2003, reinstates the dam permit and environment protection notice and removes any right of further review or appeal. In announcing the legislation, the Tasmanian Minister for Primary Industries, Water and Environment stated that:

> *The purpose of this Bill is to help advance the sustainable development of Tasmania's valuable water resources in line with the Government's aim of growing the State's agricultural sector.* (Minister for Primary Industries, Water and Environment 2003.)

Before the dam can proceed, as it is a controlled action under the Environment Protection and Biodiversity Conservation Act, it also requires the approval of the Commonwealth Minister for the Environment and Heritage. In making a decision, the Commonwealth Minister must consider relevant environmental impacts and social and economic factors. Tasmania indicated that the Commonwealth Government commissioned further work on the economic, social and environmental impacts of the project, which includes investigating ecological evidence of the effects on the two nationally significant species — the spotted tailed quoll and the *Epacris* species.

As part of the process, Tasmania also engaged consultants to undertake further analysis. It recently submitted two additional reports to assist the Commonwealth Government's assessment: an economic analysis (MJA 2003) and a report on the social and community impacts of the project (Kilpatrick et al 2003).

Marsden Jacob reviewed the economic work submitted to the Resource Management and Planning Appeal Tribunal and provided a revised economic evaluation of the project. As part of this, Marsden Jacob took into account other analyses undertaken for the Tasmanian Conservation Trust and WWF Australia (see discussion of submissions below), as well as initial work and comments from Environment Australia's consultants, ACIL Tasman. Marsden Jacob found that:

- under a more conservative base case scenario (than the Davey and Maynard draft economic evaluation) for the uptake of water from the project, based on discussions with processors and exporters, the project was projected to result in a net economic benefit (in net present value terms) of A$10.7 million (at a 6 per cent real discount rate);

- under a pessimistic scenario, which combined adverse assumptions on capital, operating, environmental monitoring and mitigation costs, and future water demand, the net present value would be lower (A$1.4 million using a 6 per cent real discount rate) but still positive – given that the major project risks were factored into the cash flows under this scenario, Marsden Jacob considered that a discount rate closer to the risk free rate should be used, which increased the net present value to A$16.8 million (using a 3 per cent real discount rate); and

- under a 'more likely' scenario, the project was projected to have a net present value of A$27 million (at a real discount rate of 6 per cent).

Marsden Jacob stated:

> … *the project is economically viable. That is, it would provide net economic benefits to Australia. This finding holds under a wide variety of deliberately conservative assumptions and we therefore conclude that the project is not only economic but robustly so.* (MJA 2003, p. xi)

The study of social and community impacts concluded that the Meander Dam is likely to result in:

- positive economic benefits for the agricultural industry and for rural centres and areas;

- higher employment, including job opportunities for young people;

- increased vocational education opportunities, particularly in agricultural and related industries; and

- an overall strengthening of the sustainability of the Meander Valley community (Kilpatrick et al 2003, p. iii).

Submissions

The Tasmanian Conservation Trust is concerned that the Tasmanian Government continues to pursue the proposed Meander Dam, despite approval for the dam being set aside by the Resource Management and Planning Appeal Tribunal. The trust made the following points (TCT 2003, p. 3).

- The tribunal's decision has 'clearly and unambiguously demonstrated that the Meander Dam is not ecologically sustainable, as the dam would have significant impacts on two nationally listed threatened species'. No effective mitigation measures have yet been proposed and the advice of expert consultants has been ignored.

- Material submitted as part of the appeal, and subsequent work by groups such as WWF Australia, has demonstrated that the project is not economically viable.

- Public consultation and education processes have been 'completely compromised' in the Government's pursuit of the dam. The decision to legislate to override the tribunal's decision 'demonstrates that the Tasmanian Government will not tolerate public participation in water development issues, and independent advice on politically favoured projects will be ignored.'

While not a formal submission, WWF Australia provided the Council with a copy of its paper on whether the Meander Dam complies with Tasmania's CoAG water reform obligations (Trujillo 2003). The paper focuses on whether the project meets the economic viability criterion. It reviews information in the feasibility study and draft economic evaluation prepared by consultants for the Department of Primary Industries, Water and Environment. WWF Australia reached the following conclusions.

- The project is not economically viable and therefore will not meet CoAG requirements. The project's net present value was assessed to be negative, at between A$13 million and A$16 million. If environmental costs were included, this would lead to a larger loss.

- The full costs of the project will not be recovered at the proposed price of A$55 per megalitre. There is no scope for increasing the price, since any price above this level has been demonstrated to reduce demand and total project revenue.

- There is no justification for the Government to subsidise construction of the dam based on it providing public benefits. Although the department's consultants quantified some public benefits, with a net present value of A$2 million, no environmental or third party costs were included.

Discussion and assessment

The Council aims to assess new rural schemes against the CoAG obligations on economic viability and ecological sustainability in the year in which the relevant Government decides the scheme can proceed.

Before the Meander Dam can proceed, it requires Commonwealth Government approval under the Environment Protection and Biodiversity Conservation Act, as well as a final decision by the Tasmanian Government. The Commonwealth Government's approval process is still to be completed.

If the Commonwealth Government approves the project during 2003-04 (the Tasmanian Government's actions indicate it has decided to proceed with construction upon approval of the project by the Commonwealth Government), the Council would ordinarily assess Tasmania's compliance

with the CoAG obligations on new rural infrastructure in the 2004 NCP assessment. The Council considers, however, that there are transparency benefits for both the Commonwealth and Tasmanian governments from the Council providing preliminary views on Tasmania's compliance before the governments make a final commitment to the project. Otherwise, the two governments would be committing funds without full information on the implications of their decisions.

The Council's preliminary view on the economic evidence is that the Marsden Jacob report provides a robust case to show that the dam would be economically viable. The analysis accounted for relevant costs and benefits, used an appropriate discount rate and responded appropriately to the issues raised by other parties. Sensitivity analysis indicated that the project is economically viable under a wide range of conservative assumptions. The Council has insufficient information at this time, however, to reach a preliminary view on Tasmania's compliance with the requirements on ecological sustainability.

If the Commonwealth Government approves the project during 2003-04, then the Council will conduct a supplementary assessment to consider whether the project satisfies CoAG's economic viability and ecological sustainability requirements. In conducting the supplementary assessment, the Council will consider the economic and environmental studies undertaken by the Commonwealth and Tasmanian governments. It will also take into account the information provided by other parties, including the Tasmanian Conservation Trust (including its recent submission to the Commonwealth Government) and WWF Australia. The Council will publicise the commencement of any supplementary assessment process and will invite all parties to provide relevant information additional to that provided for this 2003 NCP assessment. Any Council recommendations on Tasmania's competition payments will relate to 2004-05.