9 Northern Territory

Outstanding assessment issues

Provision for the environment

Outstanding issue: The Northern Territory needs to complete research projects to provide a scientific basis for further development of environmental requirements.

Next full assessment: The Council will assess allocations for the environment in 2004 and provide a stocktake of progress against each jurisdiction's implementation program to identify remaining areas for assessment in 2005 when the program is to be completed.

Reference: Water reform agreement, clause 4(b–f)

Background

In 2001, the National Competition Council found the Northern Territory continued to set contingency allocations for the environment in the absence of a scientific basis for determining environmental water requirements. The Northern Territory advised that five major research projects on environmental flows in the Daly and Douglas rivers were expected to report findings in 2002. This is the only river system in the Northern Territory where significant levels of development are planned. The Council noted that it would monitor developments in this area, including the research results, as they emerged.

Northern Territory arrangements

The Northern Territory has reported progress on the five research projects, for which the National River Health Program's Environmental Flows Initiative provided funding support.

1. Periphyton and phytoplankton response to reduced dry season flows in the Daly River

The objective of the program is to evaluate the effect of reductions in dry season flow on water quality, suspended algae (phytoplankton) and substrate algae (periphyton). Owing to their short life (a scale of days), periphyton and phytoplankton are likely to be sensitive to the hydrological and water quality

impacts of water allocation, and provide the first indication of the ecological impact of reduced flows.

2. Modelling dry season flows and predicting the impact of water extraction on a flagship species

This research will provide recommendations on environmental flows that are consistent with maintaining the biota of the Daly River, while balancing the competing demands of agriculture, recreation and tourism, conservation and Aboriginal culture.

3. Groundwater utilisation of riparian and rainforest vegetation in two tropical catchments

This research aims to determine seasonal rates of water use of rainforest and riparian vegetation, and to assess the seasonal source of water used by vegetation. It will assess groundwater dependence and environmental flows required to maintain these vegetation types.

4. Environmental flow requirements of *Vallisneria nana* and dependent macroinvertebrate fauna

The objective of the project is to map the distribution pattern of *Vallisneria nana* (water grass) patches and measure performance at the population level. The habitat preferences of this species will allow predictions of responses to altered flow. The use of beds by fauna is being investigated as part of understanding the broader habitat role of aquatic macrophytes and the possible consequences of altered flow.

5. Inventory and risk assessment of water dependent ecosystems in the Daly Basin

The aims of this project are to:

- map the area, location and extent of water-dependent ecosystems (floodplains, stream channels, wetlands, sink holes);
- establish threats from water use and land management practices;
- identify ecosystems most at risk and assess the extent of this risk; and
- provide a map base describing habitats critical for other key indicator species in the Daly Basin.

The Daly Basin has the largest flow of all rivers in the Northern Territory and was chosen as an example of a region where water resource and agricultural development are being seriously considered. Agricultural

activities such as crop farming, horticulture, pastoral activities and urban development will continue around two major areas: the Katherine region and the region comprising the majority of the Douglas River, Stray Creek and Fergusson River catchments.

The Daly Basin comprises 11 subcatchments, and most wetlands are located in groundwater discharge areas. The study focuses on the existing and forecast land use activities that may threaten the water regime of the region's wetlands. First, an inventory of the basin's water-dependent ecosystems was undertaken. This process involved developing a Geographical Information System platform and collecting data from field surveys, remote sense imagery, available reports and maps. Second, this information was used in the risk assessment, which was undertaken using a framework that was endorsed by the Ramsar Convention on Wetlands.[1]

The study concluded that 5–15 per cent of the major wetlands of the Daly Basin will be likely to experience altered water regimes due to land clearance and/or water extraction as per the study scenario. It highlighted informational gaps that prevented a more comprehensive assessment of the land and water uses posing the greatest risk, and of the wetlands at greatest risk in the Daly Basin. Most important for better understanding the basin wetlands are (a) the need for reliable hydraulic information on hydroperiod, frequency and depth of inundation for floodplain wetlands, and (b) detailed analyses of the water requirements of wetland fauna and flora.

The study recommended that wetlands outside the Daly Basin be incorporated into the overall investigation and that the category 'environment' be declared under the Northern Territory *Water Act* as the beneficial use of all wetlands in the basin. Finally, with monitoring needs in mind, the study recommended the collection of baseline data on habitat diversity for aquatic organisms, and marginal and riparian vegetation as soon as possible, along representative reaches of the Douglas, Katherine and Daly rivers. The project was completed in October 2001.

Next steps

Final reports on the remaining research initiatives are expected to be finalised by July 2002. All project leaders will then reconvene to make recommendations about specific environmental water requirements. Relevant Northern Territory agencies will consider these recommendations by the end of September 2002. Public workshops, held in conjunction with consultation on the Daly Region Water Strategy, will be held in November–December 2002.

[1] The Ramsar wetlands are those listed under the 1971 Convention on Wetlands as wetlands of international importance.

Discussion and assessment

In the 2001 NCP assessment, the Council found that the Northern Territory had met minimum commitments in relation to the national principles for the provision of water for ecosystems. Principle 2, however, requires that provision of water for ecosystems should be based on the best scientific information available on the water regimes necessary to sustain the ecological values of water-dependent ecosystems. Principle 11 requires strategic and applied research to improve the understanding of environmental water requirements.

The Northern Territory advised that research projects on current environmental flows in the Daly and Douglas rivers were under way, and that the results of this research would form the basis for further development of the Northern Territory's approach to environmental flows. The research projects were expected to report findings in 2002. The Council therefore wanted to monitor developments in this area, including the results of research as it emerged, to ensure provision of water for the environment in the Northern Territory is being adequately addressed.

The science in this area is still emerging. Further, the Northern Territory advised in 2001 that unless the findings of these projects show existing environmental allocations are significantly inadequate, the projects will not have an impact on the levels of existing environmental allocations. These contingency allocations have been set on a conservative basis. Any variations to environmental water requirements as a result of the projects would occur as part of the five-year review of the operation of a water allocation plan.

For this assessment, the Council was provided with a copy of research project 5. The Council notes that Environment Australia endorsed the project's approach as suitable to the circumstances of the Northern Territory. The Council has reviewed the findings of the project and is satisfied that the Northern Territory is meeting the outstanding 2001 NCP commitment. The Council will re-examine progress in this area in the 2004 NCP assessment.

Public education

Outstanding issue: The Council undertook to monitor the development of public education programs in future NCP assessments.

Next full assessment: For all future NCP assessments, the Council will examine public consultation and education measures for the reform priority that falls due for assessment in that year.

Reference: Water reform agreement, clauses 7(a–e)

Background

In 2001, the Council found that the Northern Territory was beginning to develop community materials on the water reform process and water issues generally, including introducing a range of materials for schools. The WaterWise NT program was piloted in 2001 and rolled out in Alice Springs, where water consumption per person is the highest of all major Territorian population centres. The aim was to introduce the program progressively to other regional centres.

Northern Territory arrangements

The community–based Alice Springs Urban Water Management Strategy reference group initiated WaterWise NT for 2002. The program is targeted primarily at schools, although community events, public displays, print and electronic media advertising and other general promotional activities will aim to raise general community awareness of water issues. A facilitator is permanently based in Alice Springs to support the program.

School students are recognised as major drivers of change, influencing attitudes and behaviour towards water use over the longer term. Accordingly, WaterWise NT was successfully trialled at a major Alice Springs secondary school during 2001. Secondary schools are the initial targets for the program, followed by primary schools. The program is expected to be established in all 63 schools in the Alice Springs area, with a focus on schools in remote regions, and ultimately extended throughout the Northern Territory.

The Northern Territory has advised that the potable water supply of Alice Springs is drawn from the Roe Creek borefield, where water levels are dropping by an average of 1 metre per year. Average daily use is approximately 1480 litres per person, with total consumption varying between 14 million litres and 42 million litres per day. Successfully managing demand, through the implementation of the WaterWise NT program, should defer the need for new infrastructure such as bores and sewage treatment ponds.

The primary objectives of WaterWise NT are to raise awareness of the importance of water to communities and natural ecosystems, to improve public awareness of the various impacts of water use on the environment, to introduce water saving programs, and to promote water conservation principles. Official recognition as a WaterWise School is granted and schools receive accreditation for actively contributing to each of the program's objectives. Public education activities in Alice Springs have been complemented by ongoing consultation with irrigators in the Katherine and

Ti Tree regions regarding the Northern Territory's interim policy on environmental flows.[2]

Assessment

The Council is satisfied that the Northern Territory has made sufficient progress to address the outstanding 2001 issue. Developments in public consultation and education mechanisms, including the rollout of the WaterWise NT program, will be considered in the 2004 NCP assessment.

Progress report issues

Urban full cost recovery: externalities

Progress report: Reporting on the developments in factoring externalities into pricing by urban service providers

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreements, clause 3(a)(i); Expert Group report on externalities

Background

For the 2001 NCP assessment, the Council understood that there were no explicit provisions for including the external costs of water supply in the Power and Water Authority's (PAWA) prices. Including externalities in setting prices is a requirement of the Council of Australian Governments (CoAG) guidelines. One way of meeting this requirement is to pass on to customers the costs of managing the environmental impacts of urban water use. The Council notes, however, that a comprehensive treatment of externalities also requires the Northern Territory to consider issues such as property rights and environmental standards.

In its 2001 NCP assessment, the Council recognised that the Northern Territory was considering including monitoring costs within the licence conditions for some major water users, which would then be passed on to customers as part of operating costs.

[2] The policy provides for no more than 20 per cent diversion of surface water and/or groundwater.

Northern Territory progress

For 2002, the Northern Territory reports that water and wastewater providers, including PAWA, are required to comply with a range of environmental and resource management operational standards. To the extent that these requirements increase the operating costs of these service providers they will be reflected in water and wastewater prices. The Northern Territory does not charge, however, a separate levy to reflect the costs of environmental externalities. Other resource management costs are also not included.

The Northern Territory argues that environmental charges for urban water services are not necessary at this stage of the Territory's economic development because current levels of water consumption and irrigation appear to be insufficient to have any significant environmental implications. The Government has not provided any evidence to substantiate this claim.

PAWA published an environment report for the first time as part of its 2001 annual report package. The report details the environmentally sustainable manner in which PAWA provides services in the Territory.

Urban full cost recovery: tax equivalent regimes

Progress report: Reporting on the developments to implement tax equivalent regimes (TERs) for metropolitan service providers

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreements, clause 3(a)(i); Expert Group report on tax equivalent regimes

Background and Northern Territory progress

PAWA has operated under the Northern Territory's competitive neutrality policy framework since the mid–1990s. Under this framework, the following requirements apply to PAWA.

- Income tax equivalent payments are made in accordance with the national tax equivalent regime, administered by the Australian Taxation Office.
- Goods and services tax applies in the same manner to PAWA as to other water and sewerage service providers.
- Local government rate equivalent payments are made in accordance with the Northern Territory's tax equivalents regime, administered by the Northern Territory Treasury.

- PAWA is liable for other Northern Territory taxes, including payroll tax and stamp duty on conveyances, leases, insurance and motor vehicles.

The Northern Territory's tax equivalent regime was amended to facilitate the payment of local government rate equivalents by PAWA from 1 July 2001. This is an interim measure pending the development of budget-neutral arrangements for local government grants. Once appropriate mechanisms are in place, PAWA will pay rates directly to relevant local governments.

Cross-subsidies

Progress report: Reporting of cross-subsidies in PAWA's annual report

Next full assessment: The Council will assess urban pricing reform in 2003.

Reference: Water reform agreement, clause 3(a)(i)

Background

In the 2001 NCP assessment, the Council supported:

- the proposed elimination by PAWA of the differential prices between Government and other customers;

- the measures taken by PAWA to ringfence its different business activities, because this would decrease the potential for nontransparent and inefficient cross-subsidies;

- measures to refine trade waste and wastewater charges to reflect more accurately the value of the service that customers receive, again to decrease the potential for nontransparent cross-subsidies; and

- PAWA's intention to report cross-subsidies between regional centres in its 2001 and future annual reports.

Northern Territory progress

For 2002, the Northern Territory reported considerable progress and commitment to transparently reporting and eliminating cross-subsidies.

- Future price pathway submissions to PAWA's Minister will be based on the phased elimination of cross-subsidies, including cross-subsidies from Government users to commercial and domestic customers.

- A trade waste management system was introduced on 1 January 2002 to charge for the discharge of trade waste to PAWA's sewerage system. The trade waste management system will emphasise self-regulation by industry and embrace the 'user pays' principle. Being based on this

principle, the new trade waste charges will reduce cross-subsidies between businesses producing low and high levels (or toxicity) of waste.

- Community service obligation (CSO) funding is provided to subsidise water and wastewater charges for pensioners in all Northern Territory centres. Additional CSO funding is provided for services in the Katherine, Tennant Creek and Alice Springs regions to maintain uniform tariffs across the Northern Territory. External funding of CSOs means these services are not funded through cross-subsidies.

- The Northern Territory introduced a mechanism to transparently report cross-subsidies. PAWA's 2001 annual report published tables detailing cross-subsidisation. The report demonstrates that, even after the inclusion of CSO payments, waste water services in Darwin, Katherine and Alice Springs cross-subsidise waste water operations in Tennant Creek; and that water supply services in Darwin and Katherine cross-subsidise those in the Alice Springs and Tennant Creek regions.

Institutional reform: structural separation

Progress report: Reporting on the Enforcement of drinking water standards

Next full assessment: The Council will assess institutional reform in 2003.

Reference: Water reform agreement, clause 6

Background

In its 2001 NCP assessment, the Council noted that the Northern Territory did not set specific standards for water quality and did not have an independent mechanism for auditing PAWA's compliance with drinking water guidelines. The Northern Territory envisaged that it would address these issues through its new licensing system for PAWA; PAWA would be required to monitor and report on the service provided under that licence.

Northern Territory Progress

On 6 February 2002, the Utilities Commission issued an urban water supply licence to PAWA. Copies of that licence are publicly available through the Utilities Commission web site. Clause 18 of the licence provides for the application of water quality service standards. PAWA is moving to introduce the Drinking Water Quality Management Framework into major and regional water supplies in the Northern Territory.