AUSTRALIA – MANAGING ITS WATER RESOURCES

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Abstract

Water is a fundamental resource in Australia underpinning economic growth. However, it is not an unlimited resource and Australian Governments have had to respond to its limitations and the threats that can be imposed by unsustainable use.

This paper outlines Australia's approach to water resource management, in particular, achieving a balance between environmental and economic objectives. The Water Reform Framework outlined in the paper is a Federal Government and State/Territory Government initiative which establishes the institutional settings required to support on-ground action at the regional level. Activities on-the-ground involve governments and communities working in partnership to address specific natural resource management and environmental issues on a region by region basis. On-ground actions are supported through government investment in two integrated natural resource management programs, the National Action Plan for Salinity and Water Quality and the extension of the Natural Heritage Trust. These are also outlined in the paper.

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Introduction

Australia is the second driest continent – after Antarctica. 75% of its land is arid, including 40% which is desert. A further 10% is arid for much of the year and only 15% of the continent is well watered. (White 2000) Rainfall varies from less than 150mm annually over parts of central Australia up to 2000 mm in the monsoonal north. However, an estimate of average rainfall across most of the continent is only around 450mm annually with runoff only amounting to roughly 5% for 75% of the land base. (Senate Standing Committee on National Resources 1978) Australia's climate is also unpredictable and variable. The first few lines of well-known Australia poem by Dorothea McKellar is called "My Country" and starts:

I love a sunburnt country

A land of sweeping plains

Of rugged mountain ranges

Of droughts and flooding rains ...

This scenario of droughts and flooding rains is all too real for many Australian farmers and rural residents who regularly experience both, especially those inhabiting the vast sweeping plains of inland Australia which can flood quickly and drain slowly.

Water is a fundamental resource in Australia underpinning economic growth, in particular, in the agricultural sector. However, it is not an unlimited resource and Australians are realising that they must recognise and respond to its resource limitations if it is going to continue to grow.

This paper outlines the complementary strategies adopted by Australia to address the balance between environmental and economic objectives to achieve sustainable management and use of its surface and groundwater resources. The main elements of Australia's strategy are the adoption and implementation of its water reform framework, and the regional approaches adopted to ensure on-ground action where it can make a difference.

Until the last couple of decades Australian governments, in common with other developed countries, focussed on developing water resources through large scale dam construction and the establishing irrigation systems in an attempt to develop and "drought proof" its industries and communities and support its major urban centres.

Under Australia's system of federal government responsibility for the management of water resources lies with the State and Territory Governments. At the beginning of the 20th century, and the drafting of Australia's Constitution, there was no perception that the Federal Government had a role in the management of Australia's water resources, although river basins, groundwater aquifers and biophysical regions ignore State and Territory boundaries.

However, during the 20th century the Federal Government has played a significant leadership role in promoting regional development through the provision of financial assistance to the States for the provision of infrastructure such as dams. Its first major involvement with the development of water resources was the commencement of the Snowy Mountains Scheme in 1949, in partnership with the Victorian, New South Wales and South Australian Governments. This Scheme diverted water flowing east of the Great Dividing Range west into River Murray and Murrumbidgee River of the Murray Darling Basin to provide hydro-electric power and provide water for irrigation development in the Basin. The Snowy Scheme has provided the water which supports a major proportion of Australia's

irrigation and promoted settlement of the southern portion of the Murray Darling Basin which supports many thriving regional communities and industries as well as supplementing the water supply of Adelaide, the capital of South Australia.

Financial assistance to the States by the Federal Government for water resources development and management persisted into the 1990s. Financial assistance was directed towards other large infrastructure projects, such as the Ord River Scheme in the north-west of Australia; rural water supply development in the States; flood mitigation; and provision of sewerage services in cities and larger towns. The focus was on development with little consideration in the early years to the environmental impacts of those developments.

However, since the 1980s issues of environmental health, sustainability, water availability and water quality for consumptive uses have emerged as significant issues. By then, internationally there was acknowledgement of environmental risks and debate around approaches to large scale development. This culminated in the release of the Brundtland report in 1987 spelling out principles for sustainable development, including the mutual goals of economic and environmental outcomes in policy development; and Agenda 21 in 1992 which set out a blueprint for sustainable activity across all areas of human endeavour. Also in 1992 Australia adopted a National Strategy for Ecologically Sustainable Development which provides broad strategic directions and framework for government to direct policy and decision-making.

The Water Reform Framework

Against this background emphasis was shifting from the development of the resource to improving its management and, in particular, towards recognition of the need for sustainability and economic viability as the drivers for water policy.

By the beginning of the 1990s State and Territory Governments began to move their water resource policies to reflect this changed emphasis. A combination of events and actions put water resource management high on the national agenda. Symptoms of resource degradation such as declining water quality, increasing salinity, toxic algae outbreaks and loss of biodiversity were widely publicised. At the same time irrigators were facing reduced security of supply in relation to their water allocations and demand for water had increased.

The Productivity Commission is Australia's principal review and advisory body on microeconomic policy and regulation. Its inquiry into water resources and waste disposal began in 1991 and highlighted the need for wide ranging reform of the water industry to improve its efficiency.

This momentum resulted in the development by the Council of Australian Governments (COAG) water reform framework, signed in 1994 for implementation by all State and Territory Governments. The COAG is a consultation and decision-making forum of the Federal and State and Territory Governments. The water reform framework continues to be the driver for major change in water management in Australia today.

The water reform framework, which is still being implemented, encompasses urban and rural water and wastewater industries and includes economic, environmental and social objectives. The reform program is aimed at improving the efficiency and effectiveness of the provision of water services and instituting water management planning to take into account the effects of all water use by agriculture, industry, households and the environment.

The water reform framework explicitly links economic and environmental issues within a coherent and integrated package of reform measures. Briefly these measures include:

- pricing water for cost recovery and removing cross subsidies;
- comprehensive systems of water allocations and entitlements, separated from land, and backed by secure access rights to water;
- providing for trading in water entitlements;
- specific provision of water for ecosystems;
- water service providers to operate on a commercial basis;
- improved institutional arrangements, including separation of service provision from regulation and devolution of responsibility to the lowest possible level; and
- public consultation and education.

Measures did not preclude new development but required that investment in new infrastructure is both environmentally sustainable and economically viable. This includes full cost recovery of the construction and ongoing costs from beneficiaries of the new infrastructure.

National Competition Policy

At the same time as the development of the water reform framework, Australia was entering a renewed period of microeconomic reform under the banner of the "National Competition Policy" (the NCP). In 1995 COAG agreed to a NCP package of reforms which addresses reform principles in relation to essential infrastructure facilities, pricing principles, fair competition between government and private sector business and specific structural reforms to the gas, electricity, water and road transport industries which often operated as natural monopolies.

The water reform framework was incorporated under the NCP which also provided for specific annual payments to the States for progress under these reforms. The National Competition Council (NCC) assesses progress on an annual basis. The NCP payments have been a major incentive for progress in implementing the water reform framework and the NCC has schedule of assessments and payments until 2005.

All State/Territory Governments have been active in implementing the water reforms, particularly institutional reform, the progression towards full cost recovery for both urban and rural water use and public consultation and education. Implementation over the past eight years has placed Australia in a considerably better position to deal with ongoing challenges in balancing environmental needs and consumptive use.

Urban Water Reform

Twenty-one percent (4783 GL) of total water usage in Australia 1996-97 is attributable to residential, commercial, manufacturing and municipal consumption, including sewage and drainage. Household use accounts for around 38% of this total, the water supply, sewerage and drainage sector 36%, manufacturing 15% and service industries 11% (Tisdell et al 2002).

The requirements for reform of urban water management are partially fulfilled. For the most part, service provision has been separated from regulatory, water resource management and standard setting roles. Urban water authorities have introduced two-part tariffs reflecting the service component and usage component of water delivery and full cost recovery is being implemented in most areas. This has yielded efficiency gains across most of our major cities and led to a significant moderation of demand. This has forestalled the need for further investment in storage, but the signs are that demand is now increasing and challenges remain.

Australia's cities continue to grow. Melbourne, which is currently around 3.5 million is forecast to increase by 1.2 million people over the next 50 years and Sydney which is over 4 million will increase by nearly 2 million. There are also signs that water use per capita is starting to increase again.

While demand management via price (eg user pays) and non-price measures (eg education campaigns) have been remarkably successful there is still need for further restraint and scope for greater efficiency. Twenty per cent of water supplied to Sydney householders is used for sanitation and 25% is used in the garden. Fifty per cent is used in the bathroom and laundry, while only 6% is used in the kitchen.

However, our cities are working on it. Sydney Water, for example, has implemented a strategy to reduce consumption between 1991 and 2011 by 35%. Our cities are on track with an 18% reduction in consumption to date. This has been achieved through encouraging uptake of water saving devices in the garden and bathroom, restricting water use in the garden when water supply is low and also through tackling supply efficiencies.

The Victorian Government is considering a regulatory path for mandatory water saving devices which could save enough water to supply an additional 115 000 households in Victoria's capital city, Melbourne. This initiative has wide community support.

In the future many Australians will have to consider greater use of grey water for toilets and gardens, treating wastewater on site to reduce water as a waste carrier in new industrial, commercial and high-rise developments, and treatment of water for recycling. These technologies have not played a significant role in the management and use of water in urban Australia to date but clearly have significant potential for managing water use in the future.

As demand for water increases, urban and industrial uses may compete with agricultural demand for access to water. The city of Perth on the south western coast of Western Australia has been facing extreme water shortages due to a long-term decline in rainfall. The Western Australian Government is current negotiating with a neighbouring irrigation authority to purchase water from irrigators to service the city of Perth. This is the first time Australia has seen direct competition between urban centres and irrigators for water. This may become more commonplace as our urban and regional centres face greater demand or reduced supply.

Rural Water Reform

The importance of irrigated agriculture to Australia, both in economic terms and as an essential element underpinning the social fabric of many rural and regional communities, is beyond dispute. Irrigated agriculture uses less than 1% of agricultural land in Australia. It comprises 30% of the value of all agriculture and is increasing. It produces an annual farm gate value of $A7 billion, increasing to $A96 billion after value adding. It makes a significant contribution to the Australian economy, particularly through its contribution to exports.

While the Murray-Darling Basin accounts for three quarters of all irrigated land in Australia, there is also significant irrigation activity in the other States and the Northern Territory. The growth rate of the irrigation sector, in terms of the value of its product, is outstripping the growth rate of agriculture in general. Total water use, of which irrigation takes around 70% has increased by 65% since the early 1980s. This poses a threat to significant issues for the health of our river systems.

The National Land and Water Resources Audit provides an array of data covering land, water and vegetations resources. It has data covering our most developed and monitored river systems and has

revealed that 26% of Australia's surface water and 30% of groundwater systems are either close to, or already overallocated. If not arrested this could result in significant degradation and economic and social loss. This is untenable. The water reform framework is providing the means for meeting this challenge to the future of our nation.

New legislation has been enacted by most States/Territories to support the water reforms framework. This includes provisions designed to establish water allocations and improve security of supply to irrigators, to provide allocations to the environment, and establish water trading mechanisms.

Water Property Rights

Underpinning this is the requirement for clear and unambiguous specification of water property rights. These must be clearly understood by the owners of the water and the financial institutions who lend on the basis of those rights. The evolution of an adequate property rights regime will be central to ongoing water resource managements. Such a regime must address the need for security of access and management of sovereign risk for users while at the same time enabling governments to ensure environmental requirements are met in the face of an evolving understanding of environmental science underpinning management of our water resources. Secure property rights are also essential to underpin water trading and improved efficiency in water management and use.

However, the water reforms have proven complex and difficult to implement. In many cases water allocations to irrigators have had to be reduced, sometimes quite significantly, to support the sustainability of our surface and groundwater resource base. Although reductions are usually phased over a period of time, they require water users to make adjustments to their businesses and adapt to changed expectations about access to water resources in the longer term. The current transition phase as "old" entitlement regimes are replaced by "new" water property rights is causing understandable

concern in some areas, particularly in eastern Australia as they face uncertainty over their future access to water for irrigated agriculture. This affects investment decisions in the short term. However, once access rights have been bedded down, users will have greater long term security through a clear entitlement to a share of the water resource over a fixed period of time and improved certainty to support investment.

Water Trading

Water trading can potentially reduce the impact of winding back water allocations to provide increased water for the environment and improving security for water users.

Water trading is also one way of generating higher economic growth arising from implementation of effective reforms. When water is traded, it tends to find the highest value uses. Through its scarcity and market value there is a greater drive to improve efficiency, both on farm and in the water distribution networks. Additionally, water trading creates a value on the trading market or water that is no longer required by water users.

Water trading, in particular temporary trading, has been increasing over the last decade in the Southern Murray Darling Basin where there is good interconnectivity along the River Murray and with its tributaries. Trading has also been developing within catchments, particularly within the Murray-Darling Basin where trading to date has added significantly the value of production each year. Governments are now considering measures to encourage further trade through: removal of impediments and restrictions on trade; improving access to market information and trading mechanisms; streamlining the trading process – and at the same time managing third party impacts on the environment, other users and the region.

Water Use Efficiency

Increases in water use efficiency and decreases in distributional losses, both on farm and off farm, can provide additional water to address environmental flows and over-allocation. It can also assist continued expansion and prosperity of irrigated agriculture within the limits of allocations and environmental considerations.

The Federal and State/Territory Governments are currently developing policies and actions to improve water use efficiency, including tools to monitor and report on water use efficiency and water use efficiency implementation plans. Methods for irrigators to monitor their on-farm water use efficiency, and thereby improve water management, are also being investigated.

Most State Governments also fund water use efficiency programs directly targeting to achieving water use efficiency on-farm and have demonstrated hat there is potential for significant savings through application of irrigation technology and management regimes.

Rural water authorities have also taken a lead role in trailing new technologies to promote sustainable irrigation and have also invested to reduce losses entailed in conveyancing water to individual irrigators.

However, the challenge remains for on-ground implementation of water use efficiency tools and management techniques.

Water for the Environment

Providing water for the environment is another important challenge in the water reform process. The National Land and Water Resources Audit report revealed that almost 9 out of 10 environmental

features in rivers that had been assessed had been significantly changed from their natural state. More than half the length of all rivers had changed habitat caused by the loss of vegetation. It also found that nutrient and sediment levels were excessive in more than 90% of Australia's rivers.

Attention to environmental demands for water complements sustainable production objectives as environmental benefits translate into benefits for users through maintaining a healthy source of supply and improving water quality for irrigators, industry and other users.

Particular areas in the Murray-Darling basin have already seen the benefits of providing environmental flows to better imitate natural flows for the benefit of particular ecosystems and provide for fish passage at critical points in time. For example, in 1993, it was agreed to put 100 GL of water aside each year from NSW and Victoria irrigation supplies to improve water of the Barmah-Millewa Forest. The Barmah-Millewa Forest is a 70,000 hectare group of river red gum forests with a unique range of wetland habitats. It is located on both sides of the River Murray. The Barmah-Forest on the Victorian side of the river is Ramsar listed. In 1998 and 2001, 97 GL and 341 GL water were released to slow the rate of drainage of natural floods occurring at the time. This created longer, more natural conditions for bird breeding and forest renewal resulting in a flourish of bird, frog and fish populations. Environmental flows have also been provided in the Goulburn River in Victoria to improve flow patterns where the River reaches the River Murray. They provided flushing flows to simulate small spring floods and to protect the quality of water of the River.

While environmental flows have the potential to provide many benefits, it is important to fully consider the social and economic impacts of proposed changes. However, these must be considered against the consequences of doing nothing at all. There will be economic loss for irrigators and other industry if water quality for deteriorates, if salinity increases and if other environmental problems continue

unabated. Changes to address these issues can impact on individual irrigators and businesses and have economic flow on effects to the regions involved.

Water Reform – Unfinished Business

Although the reform agenda has progressed significantly over the last 8 years, it still remains unfinished business. Water property rights for users need to be firmly established; impediments to trade in water entitlements need to be addressed while taking account of third party affects on the environment and local economies; we have a long way to go in improving our water use efficiency; and we still have a lot to learn about our environment and how to utilise our water resources sustainably.

Regional Approaches

The emphasis of the reform principles is on market-determined outcomes to improve sustainability of water use and management both economically and environmentally. However, this is insufficient in itself. Addressing natural resource management issues requires integrated action at the regional scale and must involve those closest to the problems and opportunities - landholders and regional communities. Although issues of water quality, scarcity and salinity are common across the Australian landscape, regions vary biophysically, socially and culturally engendering a range of possible responses to the social, economic and environmental values and threats they face.

In 1999 the Federal and State/Territory Governments outlined a new national approach for natural resource management which recommended a strategic regional and partnership approach to address ongoing challenges facing Australia's natural resource base. This approach both complements and builds on the progress achieved through the water reform framework, and other developments in natural resource management.

In particular, this approach builds on Australia's landcare ethic which developed during the 1990s which was declared the "Decade of Landcare". The Decade of Landcare resulted from a historic partnership between the National Farmers' Federation and the Australian Conservation Foundation. It emphasised the importance of a voluntary, self-help approach to natural resource management, relying heavily on local community groups. The Federal Government, in partnership with State and Territory Governments, provided funding to support landcare groups, including funding for research, education, technical advice, group support and on-ground works. This initiative was both a success and a watershed in increasing awareness among local communities of their responsibilities to their land and creating a commitment to sustainable land management practices.

Building on the community, volunteer approach, the Federal Government established the Natural Heritage Trust in 1996 to provide a broader strategy for addressing natural resource management issues. The Trust was a partnership with State and Territory Governments and provided funding to community groups to undertake on-ground, local environmental projects, usually within a wider regional or natural strategy. The Trust constituted a suite of 23 programs addressing a broad range of land, water and biodiversity issues. It included programs specifically addressing river health and water quality issues.

National Action Plan for Salinity and Water Quality

The National Action Plan for Salinity and Water Quality, announced in 2000, represents a further shift towards strategic regional and partnership approaches. The National Action Plan specifically addresses salinity and water quality problems in 22 key regions across Australia. It is jointly funded by Federal and State/Territory Governments.

The National Action Plan identifies high priority, immediate actions to address salinity and deteriorating water quality in key catchments and regions across Australia. Key elements of the National Action Plan are: the establishment of standards and targets to revers the spread of salinity and improve water quality based on good science and economics; integration catchment/regional management plans developed by communities which will result in substantial progress towards meeting targets; capacity building for communities and landholders to assist them to develop and implement catchment/regional plans, together with the provision of technical and scientific support; an improved governance framework to security Government investments and community action in the long term, including property rights, pricing and regulatory reforms for land and water use; clearly articulated roles for the Federal, State/Territory, local government and the community to provide an effective, integrated and coherent framework to deliver and monitor implementation of the National Action Plan; a public communication program to support widespread understanding of the National Action Plan to promote community support.

Priority actions have now been funded through the National Action Plan in a number of States that have bilateral agreements with the Federal Government. National Action Plan regions in these States are at various stages of developing their regional plans.

Arrangements between governments have been established in an overarching Intergovernmental Agreement and further detailed in Bilateral Agreement between the Federal Government and the States/Territory Governments. These agreements reinforces State /Territory Government commitment to continue to implement the water reform framework and includes commitments to cap extractions of water from surface and groundwater systems that are overallocated or approaching full allocation, and removal of impediments to the effective operation of trading markets in, and the integrated

management of, both surface and groundwater systems. These, and other issues are further developed in the bilateral agreements.

Extension of the Natural Heritage Trust

The Federal Government has also extended the Natural Heritage Trust for a further five years from July this year. Building on the regional focus of the National Action Plan, the Natural Heritage Trust extension will provide more funding directly to regional and catchment organisations across the whole of Australia to support an integrated catchment/regional approach to natural resource management.

Trust investments will focus on three connected objectives which provide a balance between biodiversity conservation and sustainable agriculture involving the sustainable use and management of Australia's land, water and marine resources. Like the National Action Plan it will also provide for capacity building through support for individuals, landholders, industry and communities with skills, knowledge, information and institutional frameworks to promote these outcomes.

The Natural Heritage Trust extension comprises four programs which will be delivered seamlessly on-ground. These programs are: Landcare – reversing land degradation and promoting sustainable agriculture; Bushcare – conserving and restoring habitat for our flora and fauna; Rivercare – improving water quality and environmental flows in our river systems and wetlands; Coastcare – protecting our coastal catchments, ecosystems and the marine environment. In particular, Rivercare will focus on a broad set of priorities as follows: improving the condition of water resources; securing access to water resources for productive and recreational purposes; encourage the development of sustainable and profitable management systems for water resources; protect and restore significant freshwater ecosystems in rivers and wetlands; prevent and control introduction and spear of aquatic pests, weeds

and other biological threats; protect and restore riverine and wetland habitat of threatened species, threatened ecological communities and migratory birds.

The Natural Heritage Trust extension will complement the National Action Plan in key catchments while providing access to funding for natural resource management plans and actions in the rest of the country.

Through the National Action Plan and the Natural Heritage Trust extension, natural resource management in Australia is now focusing on targeted action, to be delivered through partnerships between landholders, regional communities, industry and governments.

The centrepiece of these initiatives are community-base regional bodies that will develop and participate in implementing targeted actions through integrated regional natural resource management plans. Significant authority and decisions making capacity for natural resource management issues is being devolved to these regional bodies.

Federal and State/Territory Governments will support this regional approach through funding for strategic actions outlined in the plans, and through the provision of policy direct, technical assistance, skills training, information and data. Support will also involve the development of pilots for market-based instruments to encourage best management practice, assistance for research and development and progressing land and water resource policy reform.

Community Involvement in Natural Resource Management

The regional approach enables local communities to determine the mixture of mechanisms – such as on-ground action, economic instruments or appropriate planning and regulation – that are most appropriate for addressing natural resource management issues in the region.

Addressing natural resource management problems require economic, social and environmental tradeoffs. People in the regions have the local knowledge and enthusiasm to decide how best to tackle the issues their region faces. Tradeoffs will vary from region to region, but a prime example is likely to be between resource allocations for agricultural production versus resource allocation to maintain environmental values. This may, for example, lead to impacts on rural output, employment levels or the overall viability of regional town. These issues are most appropriately considered at the regional level.

Comprehensive and ongoing monitoring and evaluation is another key element of the regional approach. The Federal and State/Territory Governments will jointly accredit regional plans to ensure they will deliver the agreed outcomes, and assess the timetables, performance measures, accountability and reporting arrangements in the plans. Targets and milestones contained in the plans (for example, outcomes for water quality and salinity) are agreed between the Federal and State/Territory Governments in consultation with regional communities. Regional bodies will then report to governments on progress against the agreed outcomes. This monitoring will enable a clearer understanding of the successes and areas for improvement. Regional bodies must also be accountable for expenditure of public funds and report against delivery requirements.

Underpinning the success of this approach is the capacity of regional communities to participate in the planning, decision-making processes and actions to achieve sustainable natural resource management,

including the management and use of water resources. Under both initiatives there is an emphasis on capacity building to empower regional communities. In addition to the transfer of information, technology and technical capability, capacity building enhance both the capacity of individuals to participate and provide leadership and the social cohesion within a community to support individuals to exercise their capabilities. Highly skilled facilitators and coordinators will have a fundamental role in working with communities to adapt to this new approach towards natural resource management by: contributing to the development of regional plans; involving key stakeholders; building the communities capacity to participate; and assisting with monitoring and evaluation.

Other Measures

Implementation of the water reform framework and the regional approaches adopted through the National Action Plan and the extension of the Natural Heritage Trust are supported by number of other activities by the Commonwealth and State/Territory Governments. These include work towards the development of market-based instruments for natural resource management, structural adjustment measures, incentives and support for farm businesses, including irrigators, for education, training and planning to support sustainable management. In particular the Federal Government makes a substantial investment in research and development to meet both environmental and economic goals and support policy development and regional planning processes.

The Federal Government also works with State/Territory Governments in delivery a National Water Quality Management Strategy (NWQMS).

The NWQMS also involves the community working with government to set and achieve local environmental values and water quality objectives for water bodies and to develop management plans. It main policy objective of the NWQMS is to achieve sustainable use of the nation's water resources by

protecting and enhancing their quality while maintaining economic and social development. The NWQMS has focused on the development of national guidelines addressing a range of issues across the whole of the water cycle and complements the National Action Plan and the extension of the Natural Heritage Trust.

Conclusion

Australia's Federal Government is addressing the need for improved sustainability in the way it uses and manages its water resources through a number of complementary approaches designed to maximise the long term sustainability of its industries and communities while preserving the amenity of the environment.

All these approaches involve working in partnership with State and Territory Governments which have prime responsible for managing land and water resources in their jurisdictions. Direct participation by the Federal Government is through leadership, coordination between States/Territory Governments and financial assistance for implementation of the water reforms and initiating and supporting direct action on ground to achieve sustainability outcomes which are in broad national interest. Implementing the reforms is complex and difficult but progress is being made, demonstrating that further reform is achievable.

The water reform framework has been essential in providing the institutional framework to support changes on-ground and achieve the necessary balance between economic and environmental objectives. Regional approaches have enabled communities to become directly involved in addressing these issues at a local level through identifying specific values and threats facing their communities and working together with Governments to address them. The participation of regional and local communities is

critical to the future success in Australia's drive towards improved sustainability and economic viability.

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