

First biennial assessment of progress with implementation of the National Water Initiative



Report on the public submissions

Prepared for:
THE NATIONAL WATER COMMISSION

By
Kiri-ganai Research Ltd

DRAFT

RESEARCH WITHOUT BOUNDS



Kiri-ganai research

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First biennial assessment of progress with implementation of the National Water Initiative: report on the public submissions

ABOUT KIRI-GANAI RESEARCH

Kiri-ganai Research Pty Ltd is a Canberra based consultancy company that undertakes consultancy and analytical studies concerned with water policy and management, industry performance, natural resource management and sustainable agriculture.

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Executive summary

This report provides the results of public submissions that were received in response to the first biennial assessment of the National Water Initiative (NWI). The purposes of the biennial assessment, which is a requirement of the intergovernmental NWI Agreement, are to review progress with the NWI and State and Territory implementation plans, and to seek advice on actions required to better realise the objectives and outcomes of the Agreement.

The public submission process was managed by Kiri-ganai Research Pty Ltd to independently receive, collate and summarise public submissions and ensure objectivity in the reporting. The issues raised in submissions will be drawn on in the overall assessment of the NWI for consideration by the Council of Australian Governments in 2007.

The submission process involved requests for comment on the NWI via newspaper advertisements and personalised invitations to community-based groups, non-government organisations and industry bodies.

The personalised invitations offered recipients an opportunity to choose between providing written submissions or, if more convenient, completing a short survey form.

In all, 109 written submissions and 12 survey forms were received. The low response rate to the survey (approximately 8 per cent) is no cause for concern, as the preference made clear in the invitation was to receive fully written submissions.

The majority of written submissions address the NWI and its elements. However, there are 40 submissions that address water management issues that are not specifically covered by the NWI. Most of these submissions provided suggestions for overcoming Australia's water supply problems.

Progress of the NWI

Generally there is strong support for the NWI elements, objectives and principles with the NWI being seen as a major blueprint for national water reform. Most submissions endorsed its overall objective of achieving a nationally compatible system of managing surface and groundwater resources for rural and urban use that optimises economic, social and environmental outcomes.

While there is overall support for the NWI, the submissions show major philosophical differences with aspects of the NWI, particularly water access entitlements, water markets and trading and best practice water pricing. The difference of opinion ranges from perceiving water as a 'commons' with basic access rights through to perceiving water as a tradeable resource with licensed access entitlements able to be traded in freely operating markets.

Strong dissatisfaction is expressed in many submissions regarding aspects of the implementation of the NWI at the national level and at state and regional level. This dissatisfaction centres around observations that implementation of the NWI has been slow and patchy and has not delivered to expectations.

The strongest criticism from significant national organisations includes the view that "in some respects, Australia is further away from 'sustainable water management arrangements' than it was 12 years ago." Another observes that there has been renewed impetus in some areas of water reform, but this has not yet been translated into actions which make any material difference to water users.

Most submissions support the strengthening of the NWI into a robust and consistent national administrative framework to meet the water resource challenges Australia faces. There is a view that in combining the impacts of climate change with the legacy of an oversupply of existing licences and expectations of continued strong growth in the economy means that water is set to become the most significant limiting factor in the Australian economy. This view suggests that some state governments are resisting fundamental structural change in the water industry and this will have significant impacts on the overall economy.”

Several submissions comment on the need to clarify the NWI in relation to the National Plan for Water Security (NPWS) with the view that the NPWS should build on and comply with the principles and objectives of the NWI.

A number of submissions point to deficiencies in the inclusion of specific sectoral interests in the NWI. This includes irrigated agriculture, the nursery and garden industry, the plantation forest industry and the resources industry. There is a view that water management can be characterised as slowly reigning in over-allocations to rural users, but any savings are being swamped by almost unabated growth in urban and industrial demand.

Water access entitlements and the planning framework

Key issues raised in the submissions included the security of water access entitlements, rights of access for households, consumptive users and the environment; indigenous water rights; water sharing plans (WSPs); the over-allocation of the water resources of many systems; and the impact of separating water access entitlements from land title on local government rates.

A submission from bankers states that the objective of achieving a nationally-compatible water market has not been achieved because clear and nationally compatible characteristics for secure water access entitlements have not been implemented across basins or catchments.

Other submissions point to more needing to be done to resolve issues of indefeasibility of water title, the impact of water sharing plans or lease arrangements on the perpetuity of titles, improving the science and benchmarking of conditions underlying risk assignment, compensation for reductions in entitlements, and specific taxing and local government rating issues.

Strong dissatisfaction is expressed in some submissions about aspects of water sharing plans. The issues include perceived weaknesses in the methodology of WSPs, the inadequacy of methodology of determining environmental water allocations, equity of shares (between domestic users, consumptive users and the environment), groundwater and surface water extraction and resolving over-allocation for specific water sources.

Water markets and trading

The main issues covered in submissions for this NWI element are markets and trading as a water policy, progress in the implementation of water trading, market barriers and environmental water.

The submissions indicate some uncertainty about the concept of water markets and trading in water with requests for greater clarity on what constitutes an open market and free trade and what would represent a legitimate environmental impediment to trade. A number of submissions from individuals oppose the philosophy of water being traded and others point to trading as a cause of social inequities or adverse environmental impacts. Some do not support water trading across states and regions and point to problems of stranded irrigation

assets. However, several submissions emphasise the importance of water trading as a solution to many water issues facing Australia.

There is general agreement in the submissions that the implementation of water trading has been slow with limited progress, particularly regarding trade in environmental water. Some observe that water trading is still embryonic and predominately in temporary allocations. The submissions identify many barriers to a freely operating national water market and call for the removal of these barriers.

Best practice water pricing

This NWI element drew strong responses in the submissions. Issues covered included full cost recovery and pricing consistency; upper bound pricing; approaches to charging for, and attributing the costs of, water planning and management activities; user pays; the level of water prices; domestic water pricing; recycled water pricing; and transparency in pricing arrangements.

The submissions indicate that achievement of full cost recovery pricing is one of the most difficult issues in the implementation of the NWI. However, there is general support for an increase in prices to achieve greater water use efficiency and reduced consumption. A major national business organisation calls for a national review of rural and urban water pricing.

One prominent assessment is that progress has been made in pricing water in the upper band for the capital cities, apart from Hobart and Darwin. This assessment observes that some regional urban cities still have some way to go before they are pricing water in the upper band and many of these cities face significant water challenges where major inputs of capital investment will be required. Regarding rural water pricing reforms, there is a view that in this era of water trading and third party access, distortions in water markets could occur if rural water pricing reforms are not fully undertaken.

Other submissions have a less favourable view of the implementation of the water pricing reforms and consider that full cost recovery for water services has not been achieved and that there is little evidence that jurisdictions are moving to consistent pricing policies.

Issues which are identified as requiring further work in order to resolve difficulties are upper bound pricing in rural areas (particularly the inclusion of a rate of return on existing assets), the lack of competition and contestability in water planning and management charges, the full implementation of user-pays with all perceived users contributing (e.g. recreational users), the impact of full cost recovery pricing on low income households, disparities between prices for recycled water and potable water and transparency in price determination.

Integrated management of water for environmental and other public benefit outcomes

There is little endorsement in the submissions of significant progress regarding this NWI element. Many suggestions are made to strengthen aspects of the NWI and improve the scrutiny provided by the National Water Commission. In addition, the submissions advocate more incentives and sanctions to ensure the NWI is implemented in ways that secure sustainable outcomes across the nation.

Many submissions refer to the deteriorating condition of specific water resources and environmental assets and attribute this to poor water planning, management and monitoring of changes in environmental conditions.

On a broader scale, some submissions consider that the current management of water and aquatic ecosystems in Australia is ecological unsustainable. They refer to the importance of understanding and recognising the ecological context of water resources.

Other submissions point to the importance of policy makers and water managers having a deep understanding of the complex nexus of environmental, economic and social systems in order to develop high quality water management strategies. They suggest a consistent, nation-wide set of guidelines which recognises the diversity of human and natural systems around water resources.

The submissions comment on and advocate measures for resolving issues in environmental allocations, extraction levels and environmental flows; improving integrated water planning and management, the special attention that is required for northern Australian rivers and the need for institutional integration of natural resource management and water programmes (e.g. NAP, NHT and NWI) and the rationalisation of water agencies and resource managers (in some cases, having a single authority for regions or catchments, e.g. the Murray Darling Basin).

Water resource accounting

Among the submissions commenting on this NWI element, there is strong support for accurate and timely water accounting of Australia's water resources at appropriate scales to regional, state and national decision-making. Many of the submissions, however, express dissatisfaction about the extent to which the various jurisdictions have adopted such accounting practices and the lack of credible baseline data.

The need for accurate accounts of both surface water and groundwater resources is mentioned as a priority in order to prevent over-allocation of both sources. These submissions generally observe a lack of scientific data and adequate knowledge of the inter-connectivity of surface and groundwater systems.

Most submissions support benchmarks and performance indicators as being fundamental to accounting systems taking into account both consumptive and environmental drivers of decisions. They advocate meaningful benchmarks and indicators so that performance can be measured against accredited implementation plans, targets, and in-field management systems such as in agriculture.

There is a view, particularly among the regional NRM bodies, that governments have been tardy in coming to agreement on common indicators of water quality and quantity, and that this has been a major impediment to effective monitoring. Another concern is about inadequate resources being made available to either undertake the monitoring measurements or to adequately report against the findings.

Many submissions referred specifically to the need for uniform metering extractions of water resources from water bodies, including rivers, tributaries, groundwater and wetlands. Some suggest real-time monitoring technologies to be put in place.

Urban water reform

There is considerable divergence of views on the progress of urban water reform. A number of submissions written from a rural perspective suggest that the pace of urban water reform is impressive and worthy of emulation. Others express disappointment about the pace of reform being well behind ambitious expectations and political aspirations. One submission went further, arguing that urban water reform is the NWI's weakest area in terms of

outcomes.

Most of the criticism directed towards the pace of urban water reform is not about the NWI framework, but the inadequate responses of specific State governments or local councils. This includes confusing and unsupportive local planning frameworks inhibiting reform, as well as to the lack of innovation in water supply sourcing, treatment, storage and discharge.

Many submissions focus on the need to hasten recycling efforts and to provide and/or improve incentives to 'do the right thing'. State governments are particularly criticised for under-investment in the infrastructure required to support large-scale recycling of water in urban environments. All levels of government are criticised for the perceived lack of adequate incentives for households to install water tanks and a range of other water-efficient technologies. Some submissions acknowledge the support of the NWI for urban initiatives and urge its continuation, particularly for community education and advisory services.

Good forward planning and water sensitive design is seen as lacking in some urban constituencies. Perth, Sydney and a number of rural townships are cited as specific examples. Of particular concern, is the poor alignment of plans to prospective water use requirements of a growing population.

Some submissions argue that the notion of supply and demand for water holds little or no place in the planning process. A prominent business organisation suggests urban water is currently priced as if it were plentiful, and so leading to demand exceeding supply even within the current population and infrastructure environment.

A further issue that some submissions address is the growing issue of conflicting water demands for consumptive purposes between rural and urban industries, as well as between the rural and urban populations in general.

Knowledge and capacity building

This and the next element, *community partnerships and adjustment*, might be considered cross-cutting themes as they are relevant to the successful implementation of the previous six elements. In this respect, there is a particular call for further clarity of purpose and guidance from the NWC.

The main issues addressed are institutional capacity and resources, research and development, and promotion and education.

Several submissions comment on the lack of both office and in-field capacity within the institutions charged with implementing the NWI elements. In particular, the lack of capacity to acquire data and to observe and monitor water resources to underpin and ground-truth modeling are highlighted.

Some submissions, notably from those representing regional NRM bodies, suggest that community groups, including Landcare groups offer a potential network of on-ground expertise to assist in the implementation of NWI activities, although they would require appropriate resources and support.

R&D priorities identified by several organisations and individuals include water use and extraction thresholds across jurisdictions, the ecological basis for decision making, groundwater resources and their connection with surface water systems, water efficiency in irrigated agriculture, and benchmarking and best management practice. A national R&D corporation highlighted the need to consider social research as an important element in

managing water resources.

Making information on water resources readily accessible is considered critically important in some submissions. Some State authorities are recognised as having good datasets, but not the appropriate technologies to make data or information available to industry bodies, researchers or the wider public.

Community partnerships and adjustment

The importance of community consultation and awareness in respect of NWI activities is a prominent theme in submissions which comment on this NWI element. Without genuine consultation, it is considered that the NWI's effectiveness to contribute to a change in consumer's water use behaviour will be significantly hampered. Other submissions argue that consultation is required to underpin good planning, effective implementation of projects or both.

A number of submissions highlight the need for consultation to be objective, transparent and broad-based. A view is that the NWI needs to be broad-based so that the NWC does not simply get positive reinforcement from like-minded agencies, or be unduly influenced by the very agencies it is attempting to reform. There are calls for the inclusion of communities in discussion of all issues and not just those considered acceptable by utility managers and political leaders. On the other hand, some individuals claim that certain State agencies are influenced by the persistent lobbying of sectoral interests. The governments of Western Australia, New South Wales and Tasmania are specifically identified as performing poorly in respect to adequate consultation and stakeholder engagement.

A number of submissions deal with the issue of targeting consultation more effectively so that those with a direct stake in specific water issues are consulted directly rather than through surrogates or broad-based community or regional organisations. This includes Indigenous representation in water planning processes. Community organisations at the regional, catchment and local level also illustrate their potential to contribute to on-ground change in respect to NWI elements by offering access to their networks.

Local government stakeholders suggest in their submissions that they have felt disengaged with the NWI process, with the state governments taking the lead role. Local governments believe they have a crucial role to play with the special relationship they have with rate payers and consumers.

With regard to adjustment issues, there is a strong perception that the NWC appears to view adjustment solely in terms of water access entitlements, while in reality there are significant adjustment issues for residential consumers that require addressing. A local government association emphasises the importance for the social impact of water reform proposals to be considered at the planning stage.

There is a particular call for the three levels of government work together and with the community to identify actions necessary for achieving a secure and affordable water supply into the long term future.

1. The public submission process

The National Water Initiative (NWI) is an inter-governmental agreement between the Australian and State and Territory Governments and represents their shared commitment to Australian water reform.

Introduced in 2004, the Agreement included a requirement, commencing in 2006–07, to undertake biennial assessments of progress with the NWI and State and Territory implementation plans. The assessments are also intended to seek advice on actions required to better realise the objectives and outcomes of the Agreement.

As part of the biennial assessment, the National Water Commission engaged Kiri-ganai Research Pty Ltd to independently receive, collate and summarise public submissions to ensure objectivity in the reporting. The issues raised in submissions will be drawn on in the overall assessment of the NWI for consideration by the Council of Australian Governments. The Commission is aiming to finalise the assessment by mid 2007.

Eliciting submissions

Public submissions were received through one of two avenues:

- i. in response to advertisements (Appendix A) placed in major city newspapers on 13 January 2007 and 3 February 2007 and country weeklies during the weeks commencing 15 January 2007 and 5 February 2007; and
- ii. in response to personalised invitations to 146 community-based organisations, non-government organisations and industry bodies (Appendix B).

The personalised invitations offered recipients an opportunity to choose between providing written submissions addressing their views on the progress made against the NWI's eight elements of water management or, if more convenient, completing a short survey form (Appendix C).

In all, 109 written submissions and 12 survey forms were received (Appendix D). Only one organisation provided both a submission and a survey form. The low response rate to the survey (~8 per cent) is no cause for concern, as the preference made clear in the invitation was to receive fully written submissions.

Of the 109 submissions, five were provided in-confidence with an accompanying request not to make the response available to the public on the NWC website. All submissions received were duly acknowledged within 24 hours of receipt, with 105 posted to the website.

The following charts provide a summary of the source of submissions and surveys. Chart 1 describes the source of all responses received (121) according to jurisdictions and sectors, including public submission responses (109) and survey responses (12). Charts 2 and disaggregate Chart 1 to describe the source according to jurisdiction and sector respectively.

Chart 1: Public Submissions & survey responses

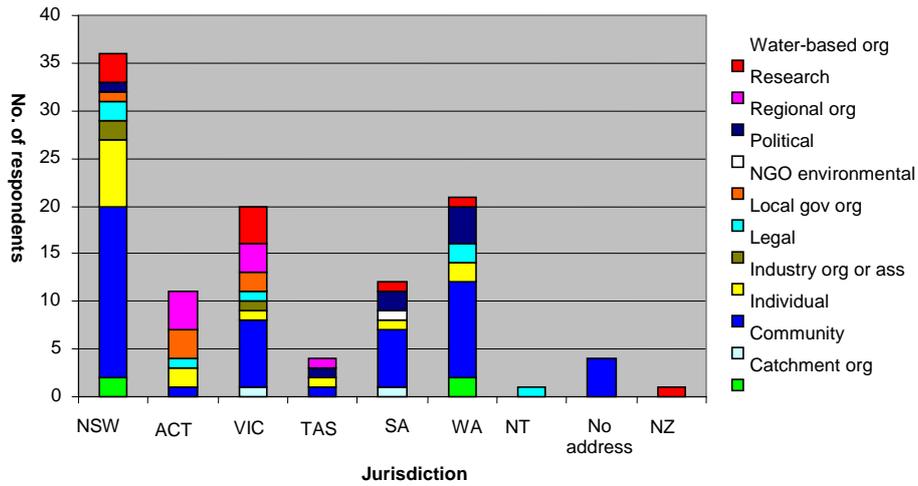


Chart 2: No. of public submissions according to jurisdiction

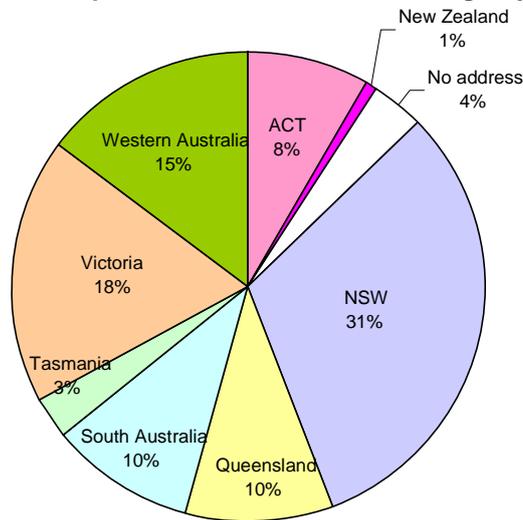
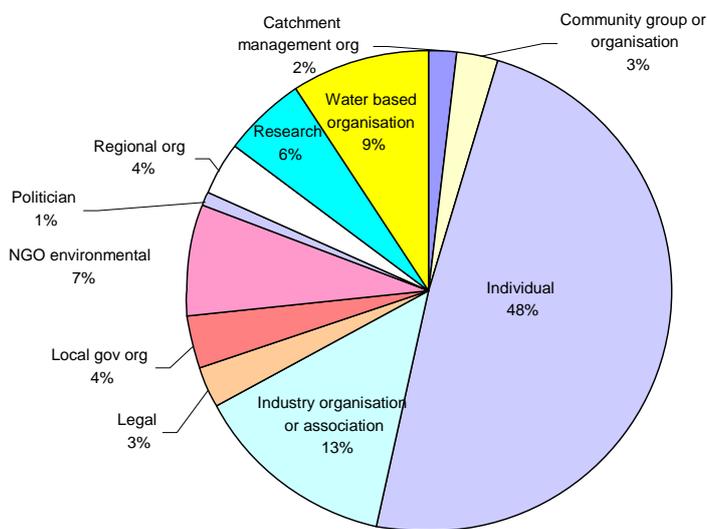


Chart 3: No. of public submissions according to sector



Summarising and analysing the submissions

Both the advertisements and personalised invitations sought submissions addressing the NWI's progress against its eight elements of water management:

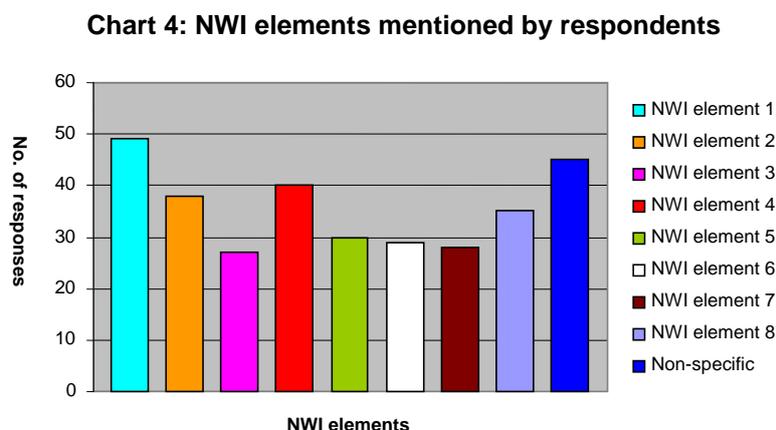
- Element 1: water access entitlements and planning framework
- Element 2: water markets and trading
- Element 3: best practice water pricing
- Element 4: integrated management of water for environmental and other public benefit outcomes
- Element 5: water resource accounting
- Element 6: urban water reform
- Element 7: knowledge and capacity building
- Element 8: community partnerships and adjustment

So as not to inhibit anyone in the public from participating in the submission process, respondents were not required to follow a strict format, and although all respondents were encouraged to report views against the progress to formally report against each or any of the eight elements. Of the 109 submissions received, around half made no formal reference to the NWI elements.

It is the view of the consultants that had a strict format been imposed, many submissions received would not have been prepared and much of the openness and transparency of the process, and the richness of responses, would have been diminished.

In summarising the submissions, the consultants used the eight NWI elements as the basis for reporting responses on the progress of the NWI. Where necessary, the consultants used their own discernment about which elements were being addressed by less specific submissions. None the less, a number of submissions provided comments and suggestions that could not be classified against any of the NWI elements. These are reported separately following the summaries against each NWI element.

All eight of the NWI elements elicited public comment. Chart 4 shows the number of references made by respondents to specific (and non-specific) NWI elements.



The 109 submissions, including the five confidential submissions, were summarised in detail. This detail appears in the accompanying report: *Summary of Comments and Recommendations of Public Submissions to the First Biennial Assessment of the National*

Water Initiative. Here the reader can quickly ascertain the main elements of each submission as well as any accompanying recommendations made by, or inferred from, the submission.

Section Two of this report uses these summaries to aggregate, analyse and report on the convergence and divergence of views against each of the eight NWI elements. For each element, the authors provide information about the source of comments, analysis of the overall views expressed and a summation of key recommendations posited across the submissions.

Charts 5, 6 and 7 provide a summary of the source of comments against each element. The first of these charts (Chart 5) deals specifically with the submissions made by individuals, the second (Chart 6) with submissions by industry organisations or associations and the third (Chart 7) by institutions with a specific responsibility for water matters.

Chart 5: Reference to NWI elements by individuals making public submissions

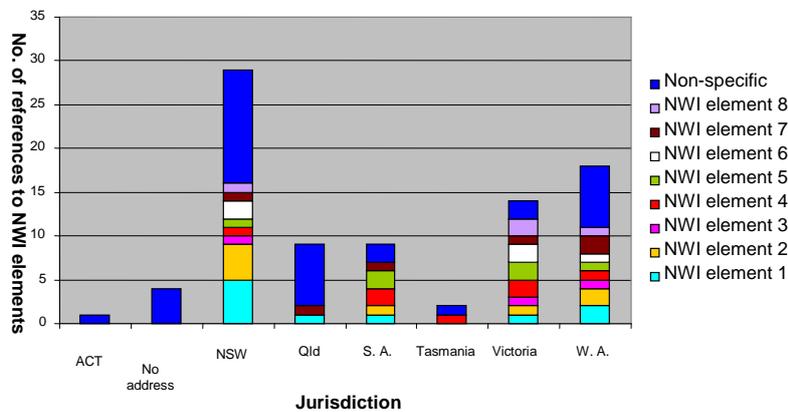


Chart 6: Reference to NWI elements by industry organisations or associations making public submissions

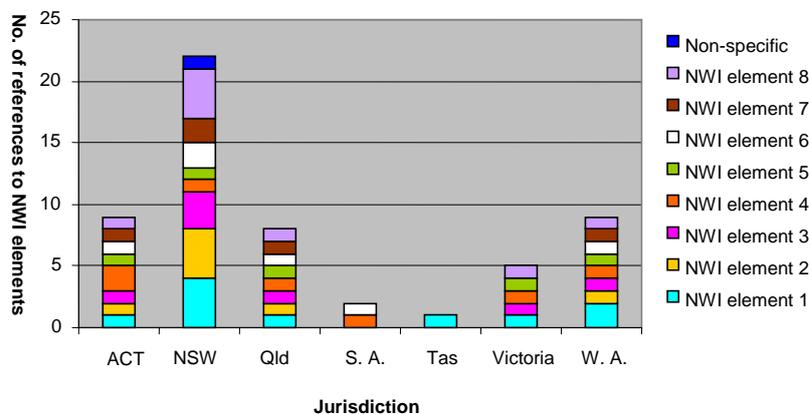
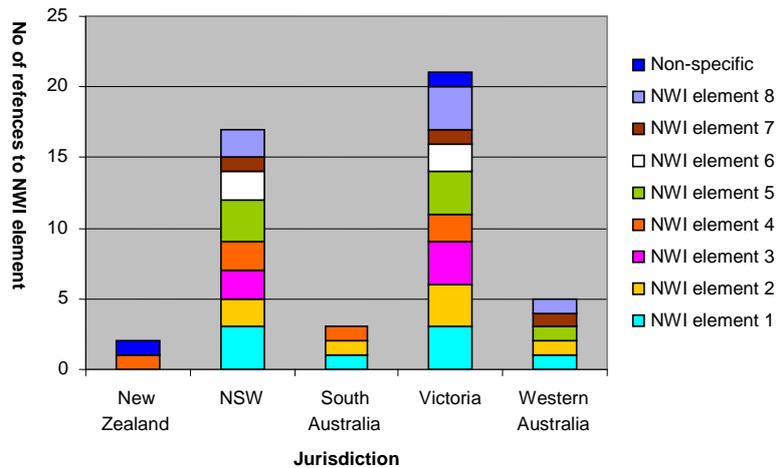


Chart 7: Reference to NWI elements by water-based organisations

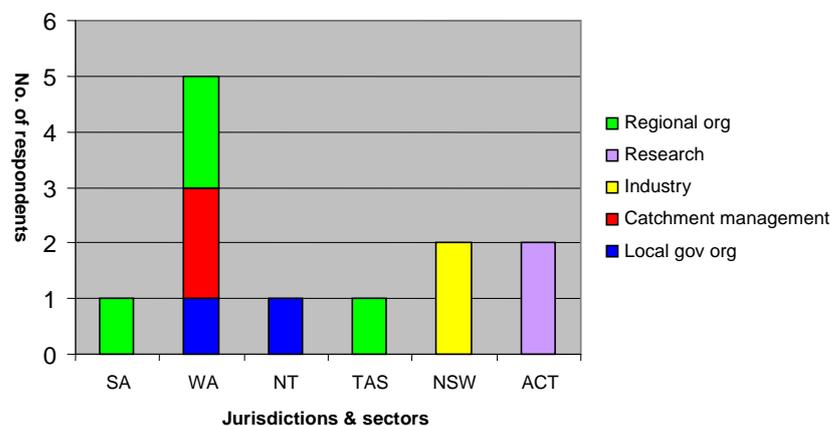


Summarising and analysing the survey responses

The option to complete a survey response as an alternative to a submission was only offered through the letter of invitation. The following Table and Chart 6 identify all sectors contacted, the number of responses from each sector and the states represented by respondents.

Sector	No. contacted	No. of respondents
Catchment management orgs	27	2
Regional organisations	72	4
Water organisations / associations	8	
Research organisations	6	2
Local government orgs	9	2
Industry (incl Industry councils)	20	2
NGO environmental	4	
TOTAL	146	12

Chart 8: Jurisdictions & sectors represented by responses



Section Three of this report summarises the survey results. In most cases, responses are organised according to the respondent's jurisdiction and/or sector and, where relevant, broad groupings of statements are organised according to their subject. A notable distinction between the survey and the written submission process is that the survey sought public feedback on a wider range of subjects than the eight NWI elements of water management. The subjects were based on the NWI's overall objectives, and include:

- a) Clear and nationally-compatible characteristics for secure water access entitlements.
- b) Transparent, statutory-based water planning.
- c) Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices.
- d) Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction.
- e) Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place.
- f) Water pricing that promotes economically efficient and sustainable use of water resources, water infrastructure and government resources devoted to management of water.
- g) Clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool.
- h) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management.
- i) Policy settings which facilitate water use efficiency and innovation in urban and rural areas.
- j) Addressing future adjustment issues that may impact on water users and communities.
- k) Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.

Full detail of the survey responses is provided in the accompanying report: *Summary and analysis of survey responses to NWI public submission process*.

2. Public views on NWI implementation and suggestions for change.

2.1 The overall NWI

The public was invited to comment on progress in the implementation of the National Water Initiative (NWI) and, in particular, each of its eight elements.

The NWI intergovernmental Agreement was signed by the Australian Government and the governments of New South Wales, Victoria, Queensland, South Australia, Northern Territory and the Australian Capital Territory on 25 June 2004. Tasmania signed the Agreement on 3 June 2005 and Western Australian signed on 6 April 2006.

Preparation of an implementation plan by the Australian Government and each state and territory government is a requirement of the NWI. These plans include steps and timelines for implementation of key actions under the NWI. The NWI also requires the National Water Commission to accredit these plans.

To date the Commission has accredited eight NWI Implementation Plans:

- Australian Government Implementation Plan;
- New South Wales Implementation Plan;
- Victoria Implementation Plan;
- Queensland Implementation Plan;
- South Australia Implementation Plan;
- Australian Capital Territory Implementation Plan;
- Tasmanian Implementation Plan; and
- Northern Territory Implementation Plan.

Western Australia is currently preparing its implementation plan in consultation with the Commission.

In accrediting plans, the Commission has stated that it is not saying that the plans – or the process of their development – are perfect. It indicates that the plans have highlighted a number of areas where jurisdictions will need to further develop their water management arrangements to meet the requirements of the NWI.

However, the Commission states that the accreditation of a plan does mean that it considers that the plan provides a good basis for implementing the NWI, informing stakeholders, and assessing the progress of implementation, including through the biennial assessment.

Comments on the NWI

Most of the public submissions commented on the NWI as a whole and on the state and territory implementation plans. As noted by one of the submissions, “achieving the NWI’s goals will take considerable time and effort and it is difficult to assess the effectiveness of the NWI just 2 years after implementation” (Lake and Bond).

Support for the NWI's objectives and elements

Generally there was strong support for the NWI elements, objectives and principles. This is summed up in the submission from the Australian Academy of Technological Sciences and Engineering that it strongly supports the NWI as “a major blueprint for national water reform and its overall objective of a nationally compatible system of managing surface and groundwater resources for rural and urban use that optimises economic, social and environmental outcomes.”

While there is overall support for the NWI, the submissions showed major philosophical differences with aspects of the NWI, particularly water access entitlements, water markets and trading and best practice water pricing.

On one end of the continuum is the contention that “water is a ‘commons’; it belongs to nature, it belongs to all living species, it is not for appropriation by governments or private concerns, it is not for sale” (Rose).

At the other end of the continuum is the position that freely operating markets will result in optimal allocation of water between users (including the environment) and that this will result in the maximisation of welfare for Australia, communities and individuals.

Views on the NWI's progress and impact

The Environment Defender's Office NSW has made an overall assessment of Australia-wide implementation of the NWI from a legislative and regulatory perspective. Its submission notes that the majority of jurisdictions have implemented measures in relation to: interception activities, creation of public registers, identification of environmental assets, appointment of water managers, and water efficiency labeling.

They assess that many states have made progress, but have not fully implemented measures regarding: providing public information on technical data underpinning plans, creating perpetual water entitlements as a defined share of the water resource, including risk assessment in water entitlements, identifying overallocated systems, including strategies for sustainability in water plans (but not targets and timeframes in all jurisdictions), providing for trading between rural and urban zones, and considering all water sources in integrated urban water management.

Furthermore, the EDO identifies outcomes which have not been adequately addressed by the majority of jurisdictions. These include: providing firm pathways to recovery for overallocated systems, integrating management of surface and groundwater systems, establishing and implementing national standards for measuring, monitoring and reporting systems; establishing flexibility in legislation to provide for adaptive management of water resources, ensuring water has equal status to other users, guaranteeing security of title; and reducing barriers to delivering water for environmental or other public purposes.

Some strong dissatisfaction is expressed in submission regarding aspects of the implementation of the NWI at the national level and at state and regional level. Murrumbidgee Private Irrigators' Inc. considers that the implementation of the NWI has been patchy and has not delivered to expectations. They believe the apparent policy expertise of the National Water Commission needs to be matched with on-ground experience in the implementation.

The NSW Farmers' Association while considering that NSW leads the nation in water reform and industry investment in water use technologies and practices, questions the commitment

and discipline of other states to implement the NWI in its entirety. They consider that the NWC has not shown adequate leadership in enforcing compliance with the NWI Agreement.

At the macro level, the Business Council of Australia states that “COAG’s 1994 objective of implementing sustainable water management arrangements that account for all uses of water (agriculture, industry, household and the environment) has not been achieved. In some respects, Australia is further away from ‘sustainable water management arrangements’ than it was 12 years ago.”

The Council has the view that “unavoidable water scarcity is one of Australia’s great myths. Australia’s water problems are a direct result of a poorly planned and managed water system that has conspired to turn a sufficient supply of water at the source to scarcity for end-users.”

Engineers Australia is also critical of the pace and extent of reform which it believes has not noticeably changed as a result of the NWI. They observe that there has been renewed impetus in some areas, but this has not yet been translated into actions which make any material difference to water users. “NWI was intended as a mechanism to robustly reform the management of water in Australia, but there are few signs that such an outcome is imminent.”

Engineers Australia comments that the persistent recourse to moral suasion and water restrictions against the background of slow and inadequate action to improve water infrastructure, especially for water recycling and to reduce distribution losses, and to find alternative supply solutions are not convincing. They consider that there is insufficient detail about the reform progress beyond what is contained in formal announcements by Ministers and agencies involved in the water reform process.

Land & Water Australia perceives a sense among the community that the implementation of the NWI has been slow, with NWC processes regarding priorities and investment decisions under the Water Fund delaying progress. LWA notes that the NWI is a major national endeavour, but the expertise and financial resources of other interested parties required to help implement it across the country are thinly spread and fragmented.

The Hunter Region Landcare Network notes that the NWI will have to produce a very robust administrative environment for the challenges ahead. These challenges are headed by the impact of climate change which suggests less water will be available in the southern Australia. The Network predicts that increasing heat stress of crops, the environment and livestock will lead to increased demand for water for any given level of economic production.

They also suggest that “combining these pressures with the legacy of an oversupply of existing licences and expectations of continued strong growth in the economy, means that water is set to become the most significant limiting factor in the Australian economy. However, some governments are resisting fundamental structural change in the water industry and this can have significant impacts on the overall economy.”

The Hunter Region Landcare Network also believes that the general community has accepted the concepts enshrined in the NWI, but individual governments and administrative processes are failing to embrace the intent of the Initiative. They want the pace of change to be accelerated and that the NWC should “expand its support through the community, because direct engagement works.”

Views on the NWI vis-à-vis the National Plan for Water Security

Several submissions comment on the need to clarify the NWI in relation to the National Plan for Water Security (NPWS). Land & Water Australia requests that the Australian

Government clarifies the role of the NWC and the NWI vis-a-vis the 'Prime Minister's 10 Point Water Plan' and the role of the new Department of the Environment and Water Resources, particularly in regard to future institutional and governance arrangements for the Murray Darling Basin. The Water Services Association of Australia considers that the NWI should not be made redundant by the NPWS and the NSW Farmers' Association calls for it to build on and comply with the principles and objectives of the NWI.

Views of sectoral groups

A number of submissions point the lack of inclusion of specific sectoral interests in the NWI. This includes irrigated agriculture, the nursery and garden industry, the plantation forest industry and the resources industry. In looking across the NSW economy, the Hunter Region Landcare Network observes that water management can be characterised as slowly reigning in overallocations to rural users, but any savings are being swamped by almost unabated growth in urban, industrial and mining demand.

Irrigated agriculture

There is strong criticism about aspects of the NWI by some irrigator groups. Northern Victorian Irrigators' Inc. believes that the water industry has moved away from a public good to a system which favors those investing in the water market. They complain that the NWI has brought another cost tier to the distribution of water to the end user and this means that water prices must be higher without lifting production, which reduces farm profitability.

They add that the NWI has presided over changes to a system whilst largely ignoring the social and economic costs to historic users. Furthermore, the NWI has taken away the security of a conservative drought resistant system in Victoria with the aim of increasing dollar returns per megalitre of water over the Murray Darling Basin. They believe the NWI is advocating spreading the resource thinner rather than providing more resource, which would encourage further investment and greater security. The Northern Victorian Irrigators Inc. concludes that the NWI has "complicated a reasonably simple system so that accountability is almost impossible."

The New South Wales Irrigators' Council advises that its initial strong support for the NWI is being eroded by aspects of the implementation of the Initiative, particularly the lack of a direct working relationship between government and industry operating at all levels. The Council is concerned with the different stages of implementation between the states which they believe is creating uncertainties for private investment and employment in irrigated agriculture.

Nursery and garden industry

The Nursery and Garden Industry of Australia suggests that the initiatives and investments of the nursery and garden industry to improve urban horticultural water use in periods of reduced water availability are largely ignored by state governments and water authorities in the implementation of water restrictions.

Resources industry

Slowness of implementation is a concern to the Queensland Resources Council which also supports the implementation of a fit-for-purpose regulatory approach. They think that this would encourage a broader view of water regulation in allowing productive interactions between different water users.

Some submissions comment on the need for mining operations to be scrutinized for their negative impact on river systems which they state includes cracking river beds and causing subsidence (e.g. Western Sydney Regional Organisation of Councils).

The East End Mine Action Group states that the generalised process for the National Water Commission to assess States science is not rigorous enough and allowed specific non-objective decisions based on selective interpretation of science to be approved for Calliope River Water Resources Plan. They allege that this “sanctioned the inappropriate trade off of the bulk of local water supplies to a multi-national mining company that has discharged it downstream as waste since 1979.”

Plantation forest industry

The plantation forest industry has specific concerns about the rigour and national consistency in the implementation of the NWI in dealing with water interception in land use systems. The Forests Industries Water Policy Group claims the South East Natural Resource Management Board is proposing to deal with plantation forestry in a manner which is inconsistent with the NWI. They suggest that “it is increasingly clear that the regional delivery framework is being either vastly under-utilised or extremely uninformed about their role under the NWI.”

The Group says that to date the plantation timber industry has been unable to detect any involvement from the National Water Commission (NWC) in guiding or monitoring the activities under the NWI of regional bodies. It suggests the NWC is abrogating its responsibilities by failing to provide this guidance and/or subsequent compliance monitoring in the regions. The Group calls on the NWC to provide greater rigour and national consistency to the implementation of Clauses 55-57 of the NWI dealing with water interception in land-use systems.

Tree Plantations Australia presents the view that water policy development which leads to the reduction in the current and future area of tree plantations will prove inconsistent with other, broader policies of government, including those relating to good natural resource management. They note that tree plantation policies and assessments have not been subject to the same level of rigour as the Regional Forestry Agreements and ought to be.

Recommendations and suggestions for change

Many submissions make recommendations or suggestions for change concerning the NWI as a whole. Examples are as follows:

- Overall, rural water issues would benefit from regular COAG focus and clear, stretching and transparent targets (Business Council of Australia).
- The roles, responsibilities and accountabilities of the NRM regions in water policy, the NWI and water trading requires clarification (Australian Landcare Council).
- The NWC require all authorities engaged in water management to provide viable plans that demonstrate their preparedness to deal with climate change, and progress towards being carbon neutral (Hunter Region Landcare Network).
- A partnership between those implementing the water policy reform agenda and those involved in managing knowledge generation and exchange activities in water resource management at the national level would provide much greater national impetus to improve water resource management in Australia than parties on either side pursuing their agendas in relative isolation (Land & Water Australia).

- The NWC facilitate greater involvement of local government authorities as the NWI progresses (Municipal Association of Victoria).
- The NWC should be staffed by should be staffed by multi-disciplinary teams with a broad range of social, environmental and production expertise (Talbot, Coral).

2.3 Water access entitlements and planning framework

A key aim of the Initiative is to restore surface and groundwater systems to environmentally sustainable levels. Water sharing plans will help to bring certainty for consumers, and allow them greater scope to plan agricultural and other activities.

Related NWI objectives:

- i. Clear and nationally-compatible characteristics for secure *water access entitlements*.
- vi. Clarity around the assignment of risk arising from future changes in the availability of water for the *consumptive pool*.
- ii. Transparent, statutory-based water planning.

2.3.1. Public response

Thirty seven submissions addressed water entitlements and the planning framework with most from NSW and Victoria. The organisations which responded to this NWI element included organisations representing bankers, farmers, irrigators, timber plantations, consumer law advocates and environmental groups. Many individuals also addressed the NWI element, particularly those with strong philosophical positions.

Chart 8: Public submissions that refer to water access entitlements and

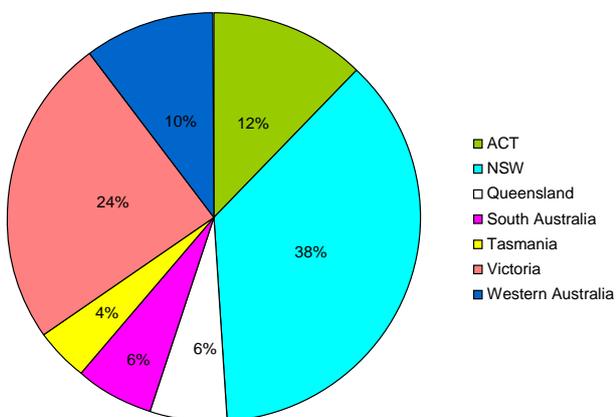
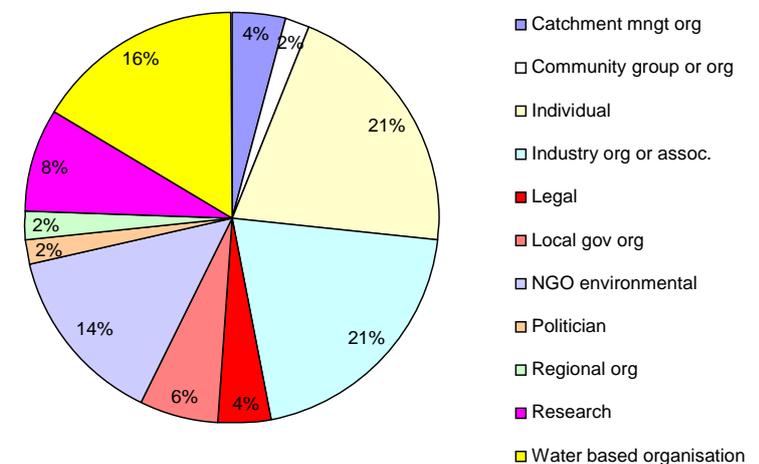


Chart 9: Public submissions that refer to water access entitlements and planning framework according to sector



2.3.2. Comments on the implementation of this element

Key issues raised in the submissions include the following:

- Security of water access entitlements:
 - WAE conditions;
 - planning reviews;
 - bulk water entitlements;
 - indefeasibility of title; and
 - assessment of risk.

- Basic rights to water – domestic human consumption, consumptive users and the environment.
- Indigenous water rights.
- Water sharing plans.
- Over-allocation of the water resources of many systems.
- The impact of separating water access entitlements from land title on local government rates.

Security of water access entitlements (WAEs)

The conditions of WAEs required to meet the NWI objectives are considered to be that they are:

- secure;
- nationally compatible;
- perpetual/open-ended;
- mortgageable on similar terms to land; and
- the risk of reduction in allocations for reasons that are not seasonal, are low and the mechanisms for such reductions to occur are transparent to all market participants.

Mortgageability

The Australian Bankers' Association notes that the NWI does not require that a WAE is defined as a property right. They believe that WAEs are at best statutory rights that can be changed by Parliament and that this is a key difference to land which financiers will take into account in developing their lending policies. The ABA considers that because of this primary difference there is little scope for WAEs to vary from the required conditions if they are to be mortgageable on similar terms to land.

Several submissions have reservations that these conditions have been met in practice. The ABA categorically states that "The objective of the NWI to achieve a nationally-compatible market that optimises economic, social and environmental outcomes has not been achieved because clear and nationally compatible characteristics for secure water access entitlements (WAEs) have not been implemented across basins or catchments."

The ABA believes that in many instances this is because States have not addressed the form of entitlement that the end users have where the State provides a bulk water entitlement. These bulk water entitlements may be managed on behalf of the end users by a corporation, cooperative or trust. In NSW, this affects approximately 30% of water used for irrigation and in WA, approximately 60% of water used for irrigation. It is also a significant issue in SA.

However, Murray Irrigation Limited (MIL - a NSW irrigation corporation that is owned by irrigator shareholders) considers that statutory water entitlement rights do not need to rest with individual irrigators. They state that the NSW irrigation corporation model is successful with individual company's holding a bulk Water Access Licence and individual irrigators being shareholders with water entitlements. MIL offers a variety of water products at varying levels of security which they believe allows water users to manage and respond to the natural variability of water supply.

Indefeasibility of title

The Environment Defender's Office NSW notes that the State is incrementally working towards indefeasibility of title and will complete the process by June 2011. Water licences are registered alongside land title, but the Register does not offer indefeasibility of title. This

means it cannot be relied upon to legally guarantee security of title as against other persons who claim an interest in the entitlement.

Perpetuity of title

The New South Wales Irrigators' Council supports the view that the NWI objective for WAEs has not been achieved. They outline a number of factors which are eroding confidence in WAE's as 'property rights'. This includes the variation between jurisdictions regarding licences in perpetuity. In addition, they contend that the achievement of the NWI objectives cannot be concluded until entitlement holders are provided with fully indefeasible title; water licence disclaimers do not undermine security and licences are issued for supplementary water interception.

The Pastoralists and Graziers' Association in WA rejects the WA Government proposal for water entitlements to be held in a 40 year 'rolling lease' arrangement with 10-yearly reviews because this does not meet the NWI requirement that WAEs "be a perpetual or open-ended share of the consumptive pool." They consider that this falls well short of the stated objective of achieving water use security for primary producers and that producers need water security when they invest large sums of money on infrastructure.

The Tasmanian Farmers and Graziers' Association is also concerned that the ten-year rolling allocation system used in Tasmania is inconsistent with what they believe is the finance sector's view of long-term investments. The TFGA considers that the present system holds risks to farmers and wants licenses that are perpetual and/or with no third party interests involved.

Risk assignment and compensation

Primary producer and irrigator organisations argue for compensation of entitlement holders when water allocations are reduced. The PGA argues that if allocations are reduced to zero, then the only value of the entitlement licence is the compensation value if this applies.

For NSW, the Environment Defender's Office NSW notes that the Government has succeeded in implementing the NWI risk assignment framework¹, but considers 'policy' and 'climate change' risks are not clearly defined. In addition, the compensation provisions only apply to areas where water sharing plans have commenced. All other licence holders still fall under the Water Act 1912, which has no compensatory provisions.

The NSW Irrigators' Council also notes that there are no agreed benchmark conditions or basis for establishing, qualifying and reviewing scientific input into the assessment of risk.

Taxation and rating issues

¹ Under the risk assignment framework in place before recent WM Act amendments, licence holders would bear the risk in relation to reductions occurring because of climate change, drought or bushfire, and also reductions stemming from improvements in scientific knowledge about water sustainability. Reductions due to government policy were compensated for by the government. After 2014, changes due to natural events are still borne by the licence holders. However, reductions due to increased knowledge will only be borne by licence holders for the first 3 per cent of reductions.¹⁷ Above this figure, the loss will be borne by the NSW and Commonwealth governments in various shares. Source: EDO NSW, 2007

A related issue raised in these submissions was the statement of the Prime Minister in September 2006 that groundwater structural adjustment payments would not be taxed as income, but as capital gains. The NSW Farmers' Association states that since then the industry is still waiting for the Australian Taxation Office to provide a tax ruling.

The separation of water entitlements from land title and its impact on council rate revenue is an issue that local government associations are asking to be resolved in all states. Local governments are seeking ways to overcome loss of revenue, but irrigation organisations are suggesting that irrigators should not be required to pay higher rates.

Water sharing plans

Comments on this issue relate to the general question of shares between domestic users, consumptive users (e.g. agriculture, mining and manufacturing industry) and the environment. Many submissions from NSW also comment on the implementation of this aspect of the NWI through Water Sharing Plans.

The Environment Defender's Office NSW notes that the vast majority of the gazetted plans in NSW do not expressly refer to the health of the water source, address risks to the water source, identify the knowledge base upon which the plans are made nor provide pathways to correcting over-allocation.

Some submissions present strong views that access to water for essential purposes is a human right which must be guaranteed and consumers should have access to an essential supply on an affordable basis (Consumer Action Law Group). This is supported by Leaman who considered that the NWI does not recognise water as a basic right in which everyone is entitled to a share.

Other submissions have the view that the environment must be afforded the primary share. For example, Rose states that "Access to water must first be afforded to existing natural features including rivers, wetlands, floodplains and estuaries ..., then to human use within reason provided that use does not cause unnecessary damage to environmental features or threaten the habitat of communities of flora and wildlife."

A third group of submissions argue that consumptive users are not being afforded an appropriate priority in water sharing. The Hunter Region Landcare Network (HRLN) states that "Water Sharing Plans in the Hunter have exacerbated water security for the farming community" and it "arises out of a discriminatory hierarchy of water licence classes that places agricultural licences at the very bottom of the list in terms of security of access to water – even lower than water users who have no licence at all."

The HRLN raises the issue of water licences for riparian rights. They believe that these are proliferating and need to be controlled with capping of the volumetric capacity. HRLN consider that existing riparian rights should be converted into a tradable commodity, and that their security be equal to existing agricultural water licences.

A number of submissions comment on weaknesses in the methodology of Water Sharing Plans (WSPs). The Lower Hawkesbury Nepean Water Users Association states that an "initial' benchmark needs to be determined for the actual total surface and groundwater water availability or available catchment maximum water yields as a firm reference point for future and equitable long term management of the available water resource." They consider that a system needs to be 'initialised' before the NWI aim 'to restore surface and groundwater systems to environmentally sustainable levels' can be achieved.

ICM Agriculture believes that the methodology for determining environmental water allocations in Water Sharing Plans is flawed. They state that hydro-geologists have insufficient resources and are extrapolating small snapshots of data from one aquifer or river system to another through modeling developed with this limited data. The level of resources set aside for the environment is then determined on the basis of fixed percentages across the State rather than detailed data on the system.

Land & Water Australia makes the case for “defining water access entitlements in a manner which leads to sustainable levels of ground and surface water extraction requires, amongst other things, a sound knowledge base of the ecological needs of river and aquatic systems.” They point to the need to strengthen the knowledge base of the ecological needs of river and aquatic systems in order to define water access entitlements that lead to sustainable levels of ground and surface water extraction.

Indigenous entitlements

The increasing level of interest in northern rivers which flow through large areas of Aboriginal owned or controlled land and Native Title claim areas highlights the question of Indigenous water entitlements. The Wilderness Society notes that there is not yet a negotiated and agreed policy framework to provide and account for Indigenous water entitlements. The Native Title Act 1993 gives little guidance on how governments should deal with native title in relation to rivers and water, and the Wilderness Society believes the NWI provides an opportunity to deal with such uncertainty.

Overallocation of water resources

Many submissions raise the issue of overallocation of water in some systems and strategies for returning rivers and groundwater systems to sustainable levels of extraction. Associate Professor Godden considers the “over-allocation of water to consumptive uses remains one of the central impediments to achieving a sustainable level of water resource use particularly as the impacts of climate change are felt.” Professor Godden adds that “without a stronger commitment by all governments to ensuring enforceable targets are set for a buy back or further allocation of water to sustain river ecosystems the NWI will remain only partially implemented.”

The Environment Defender’s Office NSW notes that in regulated rivers entitlements are now only a share of the water available, but many systems were over allocated in the range of 100-300%. Therefore, the extent of reductions in allocations in NSW will reduce, but not resolve, the problem of over-allocation. The EDO submits that legislative arrangements and WSPs are not flexible enough to provide for adaptive management of water sources in shorter timeframes than the 10 year period of the plan and the 5 year review period.

Clayfield suggests that licences and increased extraction levels are being approved in over-allocated systems. The Lower Murray Darling Catchment Management Authority states that Water Sharing Plans are not delivering end of system flows for tributaries in the Murray-Darling system. Murray Irrigation Limited (MIL) also raises the issue of end of system flows and has no confidence in the current planning framework to evaluate and address the reductions of overland flow harvesting.

Many submissions raise the failure to recognise interconnectivity of groundwater and surface water flows. MIL states that this is the case with the groundwater sharing plan for the Murray Lower Darling and it is resulting in groundwater extraction near the river that is producing record high river transmission losses.

2.3.3. Recommendations and suggestions for change

Many recommendations and suggestions for change are made in the submissions regarding water entitlements and the planning framework. Some of these recommendations are based on significant philosophical differences across a continuum from the notion of water as a 'commons' to the NWI concept of water as a tradeable resource based on statutory rights.

Some examples of the recommendations that are made are as follows:

- Specific requirements for WAEs to meet the NWI conditions (Australian Bankers' Association).
- Ensure that the significant investment in developing standards for sustainable water use through identification of environmental water entitlements is backed by a system which is transparent and open in the manner in which decisions are made about water allocations and the implementation of the water trading system (Godden).
- Publicly accessible water registers requires further development in NSW (New South Wales Irrigators' Council).
- NSW should undertake further work to relate groundwater, surface water inceptions, river transmission losses and their combined impact on the available resource (Murray Irrigation Limited).
- More clearly define risks under the risk assignment framework, for example, in relation to climate change and policy changes (Environment Defender's Office NSW).
- Data sets and benchmarking for environmental conditions require a national approach, collected within an agreed timeframe and made available to the community (NSW Irrigators' Council).
- The water sharing planning process should be more adaptive in order to cater for catchment specific conditions and the variability of rainfall and river flows that is likely to increase with climate change. Solutions need to be developed for local conditions (Southern Rivers Catchment Management Authority).

2.4. Water markets and trading

The NWI will work towards the removal of institutional barriers to trade in water. Water trading systems will have the widest possible geographic scope, and will not be restricted to within catchment areas.

Related NWI objectives:

- v. Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place.

2.4.1. Public response

Thirty seven submissions addressed water markets and trading with most from NSW and Victoria. The organisations which responded to this NWI element included organisations representing bankers, farmers, irrigators, timber plantations, consumer law advocates and environmental groups. Many individuals also addressed the NWI element, particularly those with strong philosophical positions.

Chart 10: Public submissions that refer to water markets and trading

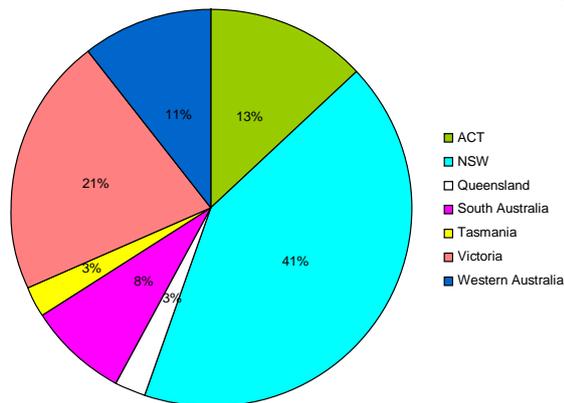
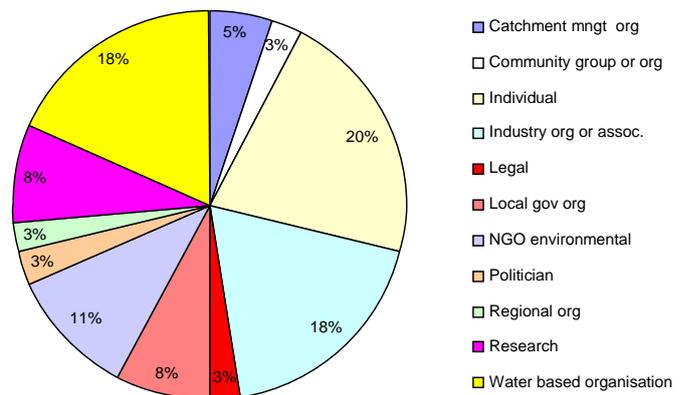


Chart 11: Public responses that refer to water markets and trading according to sector



2.4.2. Comments on the implementation of this element

While around the same number of submissions commented on this NWI element as for water entitlements and the planning framework, there was less comment on the detail of processes and implementation. The main issues covered were:

- markets and trading as a water policy;
- progress in the implementation of water trading;
- market barriers;
- environmental issues; and
- the plantation timber industry

Markets and trading as a water policy

The submissions indicate some uncertainty on the concept water markets and trading in water. The Murrumbidgee Private Irrigators Inc. considers that there is no clarity on what constitutes an open market and free trade and what would represent a legitimate environmental impediment to trade.

A number of submissions from individuals oppose the philosophy of water being traded and others pointed to trading as a cause of social inequities or adverse environmental impacts. Talbot suggests the apparent faith of water policy makers in markets needs to be questioned. Rose has stronger views and thinks that the NWI is the language of profiteering and that the global trend is away from water privatisation. Flood believes that governments, not commercial players, are the only institutions which can achieve a proper inter-sectoral balance between the different water users.

Some submissions categorically state that Australia should not pursue water trading policies (Water Our Garden City, Clayfield, Hill A., Talbot). Others give qualified support to water trading such as the Nursery and Garden Industry of Australia which states that it supports a water market and pricing driven approaches provided price levels do not impose an unfair burden on businesses.

Some do not support water trading across states and regions (e.g. Waters). The PGA which strongly supports the development of a national water market believes that this can only occur across districts and jurisdictions where water systems are linked. For example, they note that interstate trade is not relevant to Western Australia.

The Hunter Region Landcare Network supports the concept of intra-catchment and inter-catchment trade in water licences provided environmental limitations are adequately recognised in this process.

Several submissions discuss the importance of water trading as a solution to many water issues facing Australia. The Business Council of Australia considers the priority for rural water reform is to create a national water market and introduce permanent trading in water to ensure more efficient and sustainable water allocation in regional and rural areas.

Advocates of water trading believe that one of the benefits of a freely operating market is that water will move to the highest value uses as irrigators of those crops purchase water from producers of low value crops. Northern Victorian Irrigators Inc. argues against this view because of the cyclic nature of prices for agriculture products. This can mean that a 'high value' crop could quickly lose value due to supply-demand conditions after a permanent trade of water for its production.

Progress in the implementation of water trading

There is general agreement in the submissions that the implementation of water trading has been slow with limited progress. Engineers Australia considers that water trading is still embryonic and predominately in temporary allocations. Similarly, the Water Services Association of Australia states that it is disappointed at the slow pace of reform in water trading and the general reluctance at the political level to accept the benefits from water trading and in particular rural to urban water trading.

In a regional or catchment context, the Lower Murray Darling Catchment Management Authority considers that water trading is failing in the Lower Murray system due to an uneven playing field (eg, managed investment scheme investment in horticulture), incorrect

percentage allocations, stranded infrastructure, seasonality of demand factors creating severe competition for water where winter demand is transferred to summer demand crops.

Market barriers

The submissions identify many barriers to a freely operating water market and call for the removal of these barriers. The NSW Irrigators' Council points to the lack of minimum trading standards and operation protocols in the water market. These are "creating real barriers to trade and are an impediment to the development of an efficient water trading market." They also point to transaction and conveyancing inefficiencies for both temporary and permanent water trades and advocate the operations of the Australian Stock Exchange and its clearing house procedures as appropriate models for water trade in Australia. The Business Council of Australia seeks agreement to national standards for water markets, a commitment to clear timetables for reform and the immediate removal of all barriers to water trading.

The Water Industry Alliance (WIA) considers that progress on the free market approach underpinning intrastate and interstate trade has been hampered by the lack of understanding of buyers and sellers and changing rules and procedures. They suggest these rules can change between the time an agreement has been made by a buyer and seller and the time of the transfer.

The WIA suggests that problems include:

- buyers and sellers not knowing the rules;
- sellers not having a clear understanding of the amount of water available for sale;
- poor paperwork submitted by irrigators and brokers; and
- systems unable to cope with work volumes.

The Bondi Group identifies changing government positions on water trade as a factor that has frustrated movement towards permanent trading arrangements and asks what is the Australian Government's position on the frameworks agreed to by the SA, NSW and Victorian Governments.

Many submissions point to a range of inequities and adverse impacts of water trading for which they advocate a regulatory response. Others see such interventions as introducing impediments to trade and the operation of an open and transparent market.

The Northern Victorian Irrigators Incorporated believes barriers to trading are being removed, but trading is causing more problems than any other issue. They identify the following as problems:

- social problems of water leaving areas;
- social problems of water moving to new areas;
- using water further away from the source which is increasing transmission and other losses;
- using all of the Murray river as a channel all year is increasing the damage to River's banks;
- water able to be held off land thus bringing profiteering into the industry;
- water moving off highly productive land to be held by Managed Investment Schemes on land with poor soils;
- glut of different farm commodities;
- banks being allowed to sell off water to regain their investment;

- all allocated water used every year thus causing no residue for next year - run out of water earlier in drought;
- trading of water to superannuation funds or town water means farmers cannot compete on price; and
- to overcome future shortages, farmers will tend to hold more water than they need just for security.

Some consider that trading water to another catchment or district can create stranded irrigation assets and even stranded communities where they have previously relied on irrigation (e.g. Spowart). Murrumbidgee Private Irrigators Inc. notes that even though irrigators can buy water, they may not be able to get it delivered and this has had far reaching and devastating financial consequences for some irrigators and led to the suspension of the Water Exchange.

The Hunter Region Landcare Network supports the trade of water and licences between whole catchments only when environmental and social issues have been properly addressed.

Environmental issues

The question of trade in water for environmental use (called 'environmental water') is raised in many submissions. Murray Irrigation Limited suggests there is only "rudimentary progress in the development of trading flow capacity and extraction rates, and this process shows some examples of market failure, or perhaps a failure by State NRM authorities to consider trade and subsequent use issues associated with restricted peak summer flows."

They also suggest that the development of water trading regimes continues to fail to recognise physical and environmental constraints and impacts. In addition, increased water trade has also failed to account for the impacts of trade on other river issues, including salinity, river amenity and water pollution.

Some submissions want the prohibition of trade in catchments which have been assessed as having significant environmental values. The Southern Rivers Catchment Management Authority believes this to be the case for several catchments on the south coast of NSW. Others believe water trading should not be allowed from unregulated streams and rivers with irrigation using this water being phased out (Verri).

The plantation timber industry

Tree Plantations Australia (TPA) consider that the forest industry is facing an inequitable situation of limited opportunity to participate in fair and open water trading market when compared to other stakeholders such as irrigators. They state that under the South East Water Plan, there is a limitation on plantation managers to transfer or trade water into or outside of plantation estates.

TPA suggests that water markets and trading can only be effective if underpinned by good measurements and monitoring. However in the case of the forest industry, there is limited scientific research or knowledge to accurately measure water use by forests, and hence the industry is subject to an inconsistent and inequitable system. They strongly support ensuring opportunities to trade, share or lease water entitlements are inclusive of industries and groups.

2.4.3. Recommendations and suggestions for change

Many recommendations and suggestions for change are made in the submissions regarding water markets and trading. As with the related NWI element, water entitlements, many of these recommendations stem from strongly held philosophical positions on markets and trading.

Some examples of the recommendations that are made for this NWI element are as follows:

- Non market issues relating to trading need to be settled including sustainable extraction levels, improved water data and water accounting (Engineers Australia).
- Targets for returning water to rivers through trade must be specified (Godden).
- Ensure a transparent method for purchasing temporary or permanent water rights from productive users and storing and using it to support environmentally favorable outcomes (ICM Agriculture).
- Licensing of water brokers and water traders with the same requirements that apply for dealings in other assets such as real property and financial instruments (NSW Irrigators' Council).
- Coordinate and facilitate the ability of NGOs to purchase licenses for environmental purposes (Environmental Defender's Office NSW).
- Markets to be underpinned by accurate, timely and freely available market information (NSW Irrigators Council).
- Undertake reforms to streamline the process of water trading and bring forward the efficiency gains that a good trading system brings (Queensland Resources Council).
- Find an alternative to SunWater's 'take or pay' water supply contracts that provide a disincentive for industry to economise their water use (Queensland Resources Council).
- Immediately remove rules that preclude or restrict the development of water markets (Water Services Association of Australia).
- Introduce nutrient trading schemes so that water markets have a role in managing water quality as well as quantity (Western Sydney Regional Organisation of Councils).

2.5 Best practice water pricing

Water pricing and institutional arrangements under the NWI will promote economically efficient and sustainable use of water resources, water infrastructure assets, and government resources; ensure sufficient revenue streams to allow efficient delivery of services; facilitate the efficient functioning of water markets; give effect to the principles of consumption-based pricing and full cost recovery; and provide appropriate mechanisms for the release of unallocated water.

2.5.1. Public response

Twenty seven submissions address this NWI element. These include an energy company, representative organisations of industry and business, conservation societies and environmental groups, local government associations and councils, private irrigation corporations and irrigator groups, farmer organisations, public interest groups, consumer and environmental law advocates and individuals.

Chart 12: Public submissions that refer to best practice water pricing

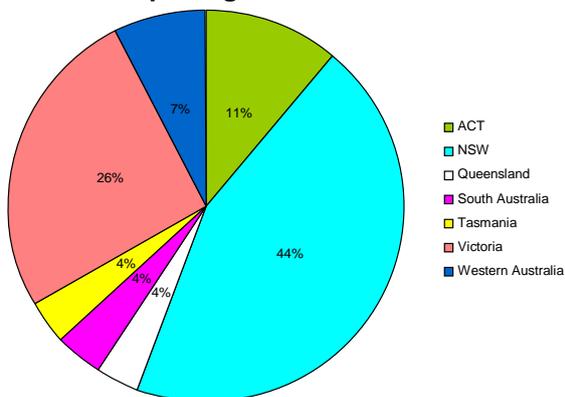
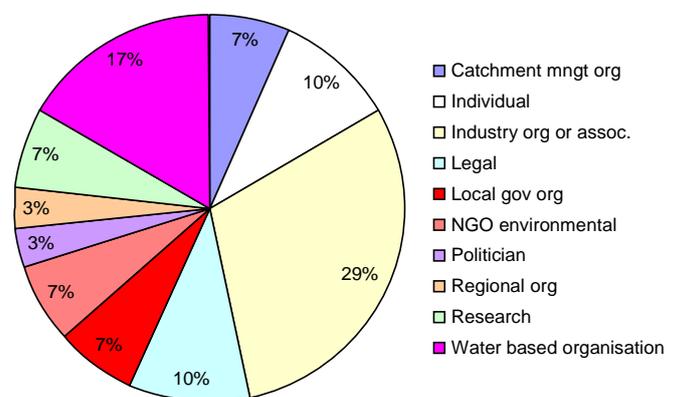


Chart 13: Public responses that refer to best practice water pricing according to sector



2.5.2. Comments on the implementation of this element

Submissions cover most of the principles underlying this NWI element including:

- consumption based pricing and full cost recovery (i.e. 1994 CoAG principle);
- the need for economic regulators (or equivalent) to determine the level of revenue for a water business based on efficient resource pricing and business costs (i.e. 1994 CoAG principle);
- consistency in approaches to water charging as agreed to by states, territories and the Australian Government (NWI Agreement) including:
 - water charging policies across states, territories and sectors for water storage and delivery in both urban and rural systems, and
 - approaches to charging for, and attributing the costs of, water planning and management activities.

The main issues raised in the submissions included:

- full cost recovery and pricing consistency;

- upper bound pricing;
- approaches to charging for, and attributing the costs of, water planning and management activities;
- user pays;
- the level of water prices;
- domestic water pricing;
- recycled water pricing; and
- transparency in pricing arrangements.

Full cost recovery and pricing consistency

The submissions indicate that achievement of full cost recovery pricing is one of the most difficult issues in the implementation of the NWI.

The submission from Water Services Association of Australia (WSAA) indicates that progress has been made with urban water pricing. They state that the capital cities, apart from Hobart and Darwin, are pricing water in the upper band and the implementation of 'two part inclining block tariffs' has been used to send stronger price signals to urban water users.

On the other hand, WSAA believes some regional urban cities still have some way to go before they are pricing water in the upper band and many of these cities face significant water challenges where major inputs of capital investment will be required.

WSAA notes that as a result of the current drought and water restrictions, revenues to water utilities have decreased and capital expenditure by these utilities has increased to bridge the gap between supply and demand. This has resulted in a reduction of rates of return for urban water utilities and the likelihood that if this situation continues it will lead to higher water prices.

Other submissions have a less favourable view of the implementation of the water pricing reforms. For example, the NSW Irrigators' Council (NSWIC) states that full cost recovery for water services has not been achieved and that there is little evidence that jurisdictions are moving to consistent pricing policies.

With regard to rural water pricing reforms, the Water Services Association of Australia believes that in this era of water trading and third party access, distortions in water markets could occur if rural water pricing reforms are not undertaken. The Association considers that it is essential that rural water prices move immediately to recover at least all operating costs and asset maintenance costs with the ultimate objective of moving to full cost recovery within a five year period. "Although water markets mean that irrigators will confront the true value of water, the reality is the amount of water traded is at the margin compared to the total volume of water used by the irrigation sector."

There is recognition that some small rural community water services will never be economically viable and in these cases, the provision of a community service obligation (CSO) is generally accepted. However, the NSW Irrigators' Council suggests that community service obligations are being ignored in favour of "exorbitant user-pays charges."

Engineers Australia considers that there has been little progress in specific water pricing issues under the NWI with regulators using quasi-economic methods in price recommendations or determinations. They observe a disconnect between water pricing,

funds available for infrastructure investment and the management of water utilities as economic entities.

Another submission that comments on the progress of implementing the NWI pricing reforms is from the Queensland Resources Council. While the Council supports the principle of a resource management charge as giving water an appropriate scarcity of value, it questions the “faltering implementation of these charges in Queensland.”

The Council also advocates the removal of price discrimination in water supply that does not reflect differences in reliability of supply or water quality as this undermines the benefits of water trading. Furthermore, “all water users should pay a price for the supply of water that reflects the full marginal social cost of that water; any other result mutes the price signals to providers of water infrastructure, which encourages underinvestment in infrastructure.”

Upper bound pricing²

A number of submissions raise concerns with aspects of upper bound pricing in rural areas. The NSW Irrigators’ Council states that it strongly opposes water charges including a rate of return on existing assets. It refers to the NSW Independent Pricing and Regulatory Tribunal (IPART) forecast that the implementation of upper bound pricing will result in payment of approximately \$29 million by irrigators to the NSW Government over the four year path of the next bulk water price determination. Murrumbidgee Private Irrigators Inc. believe that these funds are not being used to keep rural water assets up-to-date and are being absorbed in consolidated revenue.

The NSW Farmers’ Association also refers to this issue and states that it opposes upper bound pricing including a rate of return on existing assets and that this is perpetuating in transfer a wealth transfer from irrigators to the NSW Government. They consider that this will have an adverse impact on rural industries to invest, respond to drought and climate change and meet NWI risk obligations. The NSW Farmers’ Association wants upper bound pricing for State Water’s business operations to be rejected until state agencies can substantiate their costs against recognised efficiency benchmarks.

Including the rate of return in upper bound pricing is also opposed by the Pastoralists and Grazier’s Association for existing assets (ie, those existing at the date of initiation of the pricing reform in each jurisdiction). PGA provides the example of the introduction of administration fees for infrastructure that has been installed by rural landholders and believes that it is unreasonable for rural landholders to face paying fees after they have self financed this infrastructure. They consider that water collected in dams from rainfall should also be exempt from any withholding fee.

²Under *upper bound pricing*, water charges are set to recover the lower bound costs plus the costs associated with a return on capital; and return of capital (depreciation). *Lower bound pricing* is when water charges are set to recover the minimum revenue required for maintaining a financially sustainable water storage and delivery business. Lower bound pricing is set to recover recurrent expenditure requirements (operations, maintenance and administration); capital expenditure on replacement of existing assets and expanding assets to meet increases in demand, meet required service standards, and any increases in regulatory obligations; and interest costs on any debt, dividends and tax or tax equivalent payments (if any).. Source: Executive summary of report by the NWI Steering Group on Water Charges, Feb. 2007

Approaches to charging for, and attributing the costs of, water planning and management activities

This is another water pricing issue which drew strong criticism in several submissions. The NSW Irrigators' Council considers that uncompetitive business practices have been allowed to develop in government agencies and water authorities as a result of not being subject to 'real' market pressures. They believe that the business practices of such agencies in moving to full cost recovery and upper bound pricing must be subject to competition and contestability. This view is supported by the Murrumbidgee Private Irrigators' Inc. and the NSW Farmers' Association which states that NSW Government agencies are being protected from all forms of competition. They consider this is an "inequitable and economically inefficient outcome." In South Australia, Liz Penfold, MP believes an 'augmentation fee' being imposed on communities by SA Water is not being used for investment in future assets.

User pays

The main issue raised with the user-pays principle is whether all users of water are contributing to full cost recovery. The NSW Irrigators' Council considers that the principle of 'user-pays' is being ignored for many community, recreational and non-agricultural business users. This view is also supported by Murrumbidgee Private Irrigators Inc. and the NSW Farmers' Association.

With regard to the contributions of direct water users and licence holders, the Hunter Region Landcare Network advocates the principle that these consumers should only be required to be levied for those costs that can be fairly apportioned to their activities. An example of perceived inequity is raised by the Northern Victorian Irrigators Inc. which considers that a disfunction of water trading is when water is traded out of the district, local irrigators have to continue to meet the cost of externalities relating to that water.

With regard to other users, the NSW Irrigators' Council calls for recognition of stock and domestic water as a basic right with metering and full accounting with costs fully recovered by government through a transparent CSO to avoid cross-subsidisation.

The level of water prices

Submissions from both water service organisations and environmental groups point to the need for an increase in water prices to achieve greater water use efficiency and reduced consumption.

The Croydon Conservation Society wants an increase in the economic value of water by raising its price and having a price structure with a fixed charge for the cost of providing water and a variable charge for the volume used. Hill believes that water itself and environmental water in wetlands, catchments, springs and groundwater are undervalued.

Hunter Region Landcare Network suggests that first use' freshwater be priced at a rate that funds catchment health, particularly those aspects that significantly influence water availability and water quality.

Domestic water pricing

Consumer and local government groups express concern about the impact of full cost recovery pricing on low income households. The Western Sydney Regional Organisation of Councils states that all Australians should have access to water regardless of socio-economic status. The way in which this could be achieved is outlined in the submission of the Consumer Action Law Centre which advocates an arrangement of making allowance for

water businesses to price water at an affordable level for essential purposes. They suggest a system of 'social tariffs' be used to assist consumers suffering from affordability problems.

Similarly, the Public Interest Advocacy Centre believes that the NSW Government Best Practice Pricing Guidelines introduced in 2004 for 107 local water utilities fail to adequately consider the additional costs placed on large, low income and vulnerable households. The best practice pricing principles, which focus on consumption based pricing, are seen by the Centre as failing to acknowledge the essential nature of water supply and the support required to assist households to manage the transition to the new principles.

The consumption based pricing at the levels introduced in the Best Practice Water Pricing Guidelines are seen as not necessarily aligning with the direct cost of service provision for individual water utilities with economically inefficient prices resulting.

The Centre expresses serious concern about a lack of support for demand management programs and the lack of assistance for vulnerable families to manage the higher price of water. They claim this opinion has been supported in a report prepared by the Institute for Sustainable Futures for them. This report is available to the NWC and examines the impact of the reforms on vulnerable households in regional NSW.

Furthermore, the Centre believes that regional communities are not benefiting from targeted demand management activities to assist in reducing their water consumption and, therefore, total water bills.

Recycled water pricing

Alinta is concerned that the cost of water from the next major tranches of sustainable supply in a number of jurisdictions, whether from recycling, desalination, or conventional sources, will exceed current potable water prices and will not encourage reduced consumption of potable water. They want the pricing reforms agreed in the NWI to be implemented fully so that efficient recycling projects can proceed quickly and without the need for subsidies. However, the Western Sydney Regional Organisations of Councils advocates a clear price differential being maintained between recycled and potable water supply with councils being given discounts for using recycled water for public-good services. Regulatory oversight of recycled water prices is supported by the Consumer Action Law Centre.

Transparency in pricing arrangements

A number of submissions perceive current pricing mechanisms as lacking transparency and scrutiny (eg, Murrumbidgee Private Irrigators Inc.). The NSW Irrigators' Council reported that it had difficulty accessing information from NSW agencies for the Council to respond to IPART bulk water prices reviews. Liz Penfold, MP stated that stakeholders and alternative water providers cannot determine the true cost of water delivered by SA Water because it maintains all costs are commercial in confidence "even though they are a monopoly provider free from independent economic regulation."

2.5.3. Recommendations and suggestions for change

Some examples of the recommendations that are made for this NWI element are as follows:

- Conduct a national review of rural and urban water pricing (Business Council of Australia).
- Learn from the creation and establishment of markets and pricing in other sectors that have experienced micro economic reform, including in other domains of natural resources management, such as forestry, and fishing (Land & Water Australia).

- Before settling on a policy of full cost recovery, look at how other countries finance their water industries (Spowart).
- The NWI has a role to play in preparing the broader community to understand the need for water price increases (Water Services Association of Australia).
- Pricing mechanisms must be complemented with education programs about why consumption behaviour must change (Western Sydney Regional Organisations of Councils).
- Undertake public education about the components of water pricing and promote education of consumers about environmental externalities and the true cost of the water resource (Environment Defender's Office NSW).
- The public interest needs greater consideration in the pricing arrangements for water (Public Interest Advocacy Centre).
- Clarify that information on subsidies is not subject to commercial in confidence exemptions (Environment Defender's Office NSW).
- Incentives, such as further subsidisation of water tanks, should be provided by government to make change easier. Such incentives should not result in cost-shifting from State to local government, with local government picking up the cost of the incentives (Western Sydney Regional Organisations of Councils).
- Pricing and institutional arrangements must be supported by policies that facilitate water use efficiency and sustainable use of water while providing mechanisms for release of unallocated water (Tree Plantations Australia).
- Provide incentives for improved urban water design and technologies (Western Sydney Regional Organisations of Councils).
- That the NWI make as a condition of funding from the Australian Water Fund the pricing of water in the upper band for regional cities (Water Services Association of Australia).

2.6. Integrated management of water for environmental and other public benefit outcomes.

Identify within water resource planning frameworks the environmental and other public benefit outcomes sought for water systems and to develop and implement management practices and institutional arrangements that will achieve those outcomes.

Related NWI objectives:

- iii. Statutory provision for environmental and other public benefit outcomes, and improved environmental management practices.
- iv. Complete the return of all currently over-allocated or overused systems to environmentally-sustainable levels of extraction.
- x. Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.

2.6.1. Public response

Forty submissions have responded with comments on this NWI element. These were received from science and engineering organisations; representative organisations of landcare groups and networks, business, law groups, the forest industry, farmers, irrigators, water service bodies, water users and local government; environment centres and societies; conservation groups; landcare groups; catchment management authorities; private irrigation corporations; consultants; academics and individuals.

Chart 14: Public submissions that refer to integrated management of water for environmental and other public benefit outcomes

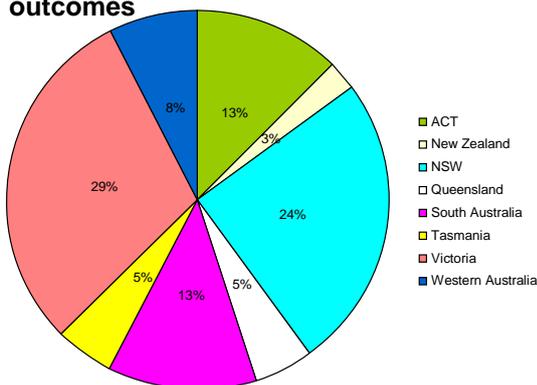
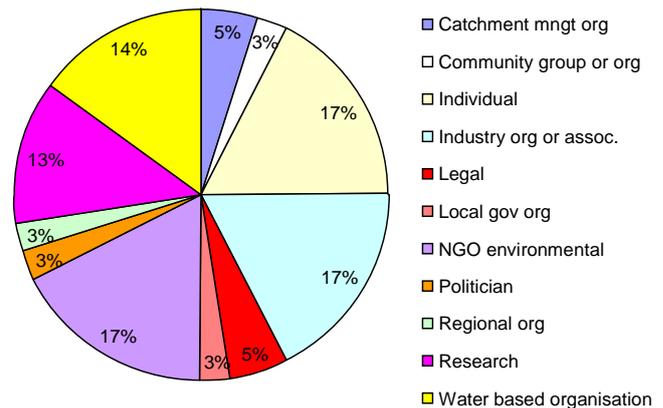


Chart 15: Public submissions that refer to integrated management of water for environmental and other public benefit outcomes according to sector



2.6.2. Comments on the implementation of this element

The main issues raised in the submissions include:

- the achievement of sustainable outcomes through the NWI;
- environmental allocations, extraction levels and environmental flows;
- integrated water planning and management;
- institutional integration;

- the plantation timber industry; and
- northern Australia rivers.

Achievement of sustainable outcomes

There is little endorsement in the submissions of significant progress with this NWI element with suggestions to strengthen aspects of the NWI and the scrutiny provided by the NWC, and develop more incentives and sanctions to ensure the NWI is implemented in ways that secure sustainable outcomes across the nation (e.g. Australian Academy of Technological Sciences and Engineering).

The Environment Defender's Office New South Wales comments that the NSW Implementation Plan does not adequately define 'environmental outcomes' and that the focus of the principles in the plan is on socio-economic impacts. It also suggests that the Plan address the lack of detail about triggers for when it is "deemed necessary to recover water for environmental outcomes."

Many submissions refer to the deteriorating condition of water resources and environmental assets either generally or in specific areas and attributed this to poor water planning, management and monitoring of changes in environmental conditions. Specific areas mentioned include the Murray-Darling Basin, the Scott Coastal Plain, the Hawkesbury Nepean River, the Nymbodia River, Warego River, Gngangara and Jandakot groundwater mounds, the Yarragadee Aquifer, Eyre Peninsula and Tasmania. These submissions call for the NWI to address and promote the restoration of habitats, floodplains, wetlands and dependent ecosystems and the recovery of threatened water species (e.g. Croydon Conservation Society).

On a broader scale, Professor Lake and Dr Bond state the current management of water and aquatic ecosystems in Australia is ecological unsustainable. They consider that flowing waters in southern Australia are in a damaged state and that restoration efforts are insufficient to redress the degraded state of many riverine ecosystems and their catchments. A particular deficiency is our failure to learn from experience as few projects are adequately monitored even though considerable sums of money have been spent on stream/river restoration.

A number of submissions refer to the importance of understanding and recognising the ecological context of water resources. Lake and Bond suggest that water management should be set in an ecological context of water bodies and their catchments. This means a comprehensive consideration of catchment ecology – its terrestrial and aquatic components – and links between these components. The authors believe this is becoming more important with large-scale forces of ecosystem change and degradation, such as salinity and climate change with an increase in the magnitude, severity and spatial extent of droughts.

Professor Tane has an even stronger view for ecologists to have a greater say in river management and that Australian water management be "brought under people with expertise in ecology."

Other submissions point to the need for policy makers and water managers having "a deep understanding of the complex nexus of environmental, economic and social systems in order to develop high quality water management strategies" (e.g. Australian Landcare Council). They suggest a consistent, nation-wide set of guidelines which recognises the diversity of human and natural systems around water resources.

Environmental allocations, extraction levels and environmental flows

Many submissions comment on these issues. In relation to NSW, the Environmental Defender's Office (EDO) notes that the NSW Water Management Act 2000 accords environmental water the highest priority over all other water in the system, except in times of drought. However, they point out that certain Water Sharing Plans (WSPs), especially those for 7 key regulated rivers, use a rule for allocating water to the environment that provides "water in excess of the long term annual average extraction limit" or water that is "left over." Their view is that this method of committing environmental water from the residue of allocations is now law in NSW and the only remaining statutory requirement is that a management plan must allocate water for both consumptive and environmental purposes.

The EDO (NSW) points out that the NWC review of the Lachlan WSP found no scientific studies to establish flow requirements for different ecological components and there is no publicly available information about the process. They claim this also applies for the Hunter WSP and that NSW generally has not been able to demonstrate that the best available scientific evidence was used to allocate environmental water.

The Australian Landcare Council states that further progress needs to be made in assessing and quantifying environmentally sustainable levels of extraction for all managed systems. This view is supported by Murray Irrigation Limited which requests further research and debate on clarifying environmental needs and levels of sustainable extraction including identifying productivity, environmental and social trade-offs.

In the case of Victoria, the Environmental Defenders' Office (Victoria) considers that reform of the water planning framework for recognising environmental water allocations has proceeded on the basis of recognition of existing consumptive rights. This has significantly limited the ability of the reforms to address the legacy of over allocation of water resources and the need to return water to stressed rivers. In addition, the EDO suggests recent experience raises serious concerns about the security of environmental water allocations in Victoria. Overall they believe, greater attention is required to accountability for the management of environmental water allocations.

In New South Wales, the Clarence Environment Centre wants an examination of how many NSW rivers are managed with environmental flows being ignored. The Environment Defender's Office (EDO) NSW is calling for research and consultation as an urgent priority to address identified knowledge gaps. They also suggest the objectives, strategies and performance indicators in WSPs be amended to ensure that the objectives and performance indicators are capable of meaningful measurement and evaluation. In addition, the EDO calls for the clarification of firm pathways to recovery in over allocated systems, based on the best available science.

From the viewpoint of consumptive users, irrigators are requesting open and transparent management and accountability of all water environmental resources as a basis for its provision. Murrumbidgee Private Irrigators' Inc. are concerned about the integrity and independence of scientific data used to support or justify programmes such as the Living Murray Initiative.

Irrigators believe there is presently inequity in these arrangements between consumptive use and environmental use. The NSW Irrigators Council is categorical that environmental water entitlements must be subject to the same public reporting requirements as apply to all other licensed entitlements. They call for detailed accountability protocols on environmental allocations and a system-wide environmental water management plan.

Regarding the effectiveness of environmental flows, ICM Agriculture considers the targeted releases of environmental water for very specific and time dependent biological goals

appears to be one area where policy and practice is coming together. They believe that volumes for environmental flows in themselves are not the answer; flows must be targeted and the results monitored and measured. The determination of environmental flows works best when carried out in close cooperation with landholders”.

Water Services Australia notes that there is slow progress in returning flows to the River Murray. They state that the urban water industry supports the need for the environment to be considered a legitimate user of water and that water resource plans should take into account the need to protect river health. “In areas where there is over allocation all measures available to reduce the over allocation, including buying back water entitlements, should be pursued.”

Integrated water planning and management

The predominant issue in submissions that deal with this NWI element is the question of integration in relation to:

- catchment management;
- the interconnectivity of ground and surface water; and
- whole landscapes;
- water supply and population growth;
- institutional integration,

There is strong endorsement of the need to strengthen the NWI in favour of integrated catchment planning and management (e.g. Australian Academy of Technological Sciences and Engineering). Associate Professor Godden advocates changes in water management in conjunction with a greater emphasis upon the broader integration of land use planning and natural resource management that has a foundation in integrated catchment management.

The Clarence Environment Centre raises the issue of the river system being divided into specific catchments and these being managed as “separate disconnected entities”. Similarly, the Southern Rivers Catchment Management Authority laments the apparent shift from river management to water sharing and considers the ultimate objective of river health is now often overlooked by the water sharing process. They point to a need for a new emphasis on an integrated approach to water and river management and this should include the integration of the management of all groundwater resources with the surface waters. The lack of hard science and data on the interconnectivity of ground and surface water systems is a commonly raised deficiency in planning and managing the extraction of ground and surface water and its impact on each source.

Burnett calls for a whole-of-landscape approach to the restoration of water balance and quality. In particular, he advocates appropriate management of soil biology as being essential to the quality and quantity of water that moves to underground sources and streams. He suggests that land and water management problems be addressed by utilising the knowledge of scientists such as Dr Christine Jones with a system of eco-credits for good land management.

Other submissions also discuss the need for greater integration of water and other natural resource management planning. Land & Water Australia have a particular concern with the need to address the linkage between water planning and NRM planning at the regional scale, as well as between water and NRM planning and traditional land use planning.

With regard to environmental water, Murrumbidgee Private Irrigators Inc. advocates single management plans for water courses which cross state borders. They want environmental

water plans to be developed with stakeholder input and that releases be benchmarked against the plan and subject to climatic conditions being experienced. “In drought times, less water may be released for environmental purposes as the river would have less water in its natural state.”

The Pastoralists and Graziers’ Association support the need for more strategic and integrated land and water resource planning with environmental water managed at a catchment level to deliver catchment and basin wide outcomes.

Institutional integration

Linked to calls for further development of integrated catchment planning and management is a concern about the proliferation of water management bodies. At the largest scale, the Hunter Region Landcare Network requests that the entire Murray Darling Basin be managed by one authority. This view is supported by Holmes, although he suggests that the national body needs to be non-political and not allied to agriculture or manufacturing.

The Western Sydney Regional Organisation of Councils expresses concern that for regional systems such as the Hawkesbury-Nepean, there is no one single authority responsible and accountable for maintaining the health of the river and its environs. Their call is that a single authority should be established to deal with the multiplicity of issues and potential conflicts in priorities.

Irrigator groups make similar claims regarding environmental water agencies with the NSW Irrigators’ Council calling for the rationalisation of the number of agencies to ensure all assets are utilised in the most efficient manner. They advocate that only one taxpayer funded environmental resource manager be responsible for each water source or system.

At the regional level, there is a call by the Australian Landcare Council for the roles, responsibilities and accountabilities of the NRM regions to be clearly articulated and for the regions to be empowered and resourced to help implement national water policy where appropriate. The Council wants consideration to be given to allowing the regions to purchase water for environmental flows and other initiatives adopted for enhancing an integrated approach. They also suggest the greater integration of the National Action Plan for Salinity and Water Quality, the Natural Heritage Trust and the National Water Initiative.

The plantation timber industry

Issues faced by the plantation timber industry are again raised under this NWI element. For example, the Forest Industries Water Policy Group states that it has very serious concerns about the progress of water policy implementation in south east South Australia.

It claims the South East Natural Resource Management Board is proposing to deal with plantation forestry in a manner which is inconsistent with the NWI. They suggest that “it is increasingly clear that the regional delivery framework is being either vastly under-utilised or extremely uninformed about their role under the NWI.”

The Group says that to date the plantation timber industry has been unable to detect any involvement from the National Water Commission (NWC) in guiding or monitoring the activities under the NWI of regional bodies. It suggests the NWC is abrogating its responsibilities by failing to provide this guidance and/or subsequent compliance monitoring in the regions. The Group calls on the NWC to provide greater rigour and national consistency to the implementation of Clauses 55-57 of the NWI dealing with water interception in land-use systems.

Tree Plantations Australia presents the view that water policy development which leads to the reduction in the current and future area of tree plantations will prove inconsistent with other, broader policies of government, including those relating to good natural resource management. They note that tree plantation policies and assessments have not been subject to the same level of rigour as the Regional Forestry Agreements and ought to be.

Northern Australian rivers

The Wilderness Society calls for special consideration of water in the northern Australian landscape and for relevant Governments to recognise that this region requires a fundamentally different approach to ongoing water management and river conservation. The Society considers northern Australia to be “one of the most intact and healthy landscapes remaining on Earth and therefore holds unique and special values that must be conserved.” In particular, they mention the critical need to protect the hydro-ecology of the north.

The Wilderness Society considers that the ongoing ecological health of northern rivers is threatened by large scale water infrastructure and associated change to land and water use through expansion of irrigated agriculture. It believes the Australian Government as overseers of the NWI should have responsibility for the coordination of river protection. “There is presently little legislation covering the protection of these rivers, and the Environmental Protection and Biodiversity Conservation Act 1999 does not recognise geomorphological or hydrological values.”

The major policy points identified by the Society for managing northern rivers are:

- recognise the primacy of conservation as the guiding management approach for the rivers of Northern Australia through the development of a Northern Australia Rivers Protection Plan;
- discourage economic development activities and water planning policies and processes that threaten the health and conservation of the rivers of Northern Australia;
- facilitate cross border and cross jurisdictional conservation management of the rivers of Northern Australia;
- support the policy approach of relevant State and Territory Governments to provide legislatively based protection of the rivers of Northern Australia;
- ensure funding is available for State and Territory Governments towards the ongoing management and conservation of the rivers of Northern Australia;
- support and recognise aspirations of Indigenous communities to manage and protect the conservation values of the rivers of Northern Australia; and
- closely monitor the success of the State’s and Territories progress on protecting rivers of high conservation value.

2.6.3. Recommendations and suggestions for change

Some examples of the recommendations that were made for this NWI element are as follows:

- Recast NWI documentation to emphasise the deterministic role of catchments and to deal sufficiently with their idiosyncrasies in securing sustainable decisions on water allocation and use (Australian Academy of Technological Sciences and Engineering - ASTSE).
- The NWC to call for and, where necessary, demand a systems approach to planning and managing water catchments (ASTSE).
- Further progress needs to be made in assessing and quantifying environmentally sustainable levels of extraction for all managed systems (Australian Landcare Council).

- Introduce eco-system credits for good land management (Burnett).
- Ensure sufficient environmental flows for Australia's rivers and catchments (Business Council of Australia).
- Amend NSW Water Sharing Plans to more accurately reflect the priority of environmental water against other water users (Environmental Defender's Office, NSW)
- The NWC to provide greater rigour and national consistency in dealing with water interception in land-use systems.
- The entire Murray-Darling Basin should be managed by one authority (Hunter Region Landcare Network).
- Environmental flows for very specific and time dependent biological goals should be determined in close cooperation with landholders (ICM Agriculture).
- Need for a concerted effort at stream and catchment restoration to restore ecological sustainability to flowing water and their catchments (Lake and Bond).
- Need for greater progress in the development of related knowledge sharing and capacity building activities for the RNWS theme of water dependent ecosystems (Land & Water Australia).
- Where public decisions result in reductions of water security for consumptive users, government should purchase the additional water required through investment in infrastructure for water efficiency saving or market measures (Murray Irrigation Ltd).
- Establish open and transparent management and accountability of all water environmental resources (Murrumbidgee Private Irrigators' Inc.).
- Rationalise the number of environmental water agencies to ensure all assets are utilised in the most efficient manner. Only have one taxpayer-funded environmental resource manager for each water source or system (NSW Farmers' Association).
- Sharing of water savings from infrastructure development, water use efficiency measures and voluntary sales should be shared on a 50:50 basis between irrigators and the Australian Government (Pastoralists and Grazier's Association).
- Observe natural systems over time and then consider ways in which human habitation and use of water best fits existing natural patterns (Rose).
- The Strategic Science Framework for the NWC incorporates key ecological principles identified by The Wilderness Society's Science Council, in particular the role of hydro-ecology (The Wilderness Society).
- That relevant Governments work to define Indigenous cultural values within ecologically healthy river systems (The Wilderness Society).

2.7 Water resource accounting

The outcome of water resource accounting is to ensure that adequate measurement, monitoring and reporting systems are in place in all jurisdictions, to support public and investor confidence in the amount of water being traded, extracted for consumptive use, and recovered and managed for environmental and other public benefit outcomes.

Related NWI objectives:

- vi. Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management.

2.7.1. Public response

Twenty four submissions addressed water accounting with over 40 per cent of these from NSW. Organisations from all sectors responded to this NWI element, although over half came specifically from water-related organisations (31 per cent) and industry associations (20 per cent). A number of individuals also addressed this NWI element, seeking accountability in knowing how much water is used where and by whom.

Chart 16: Public submissions that refer to water resource accounting

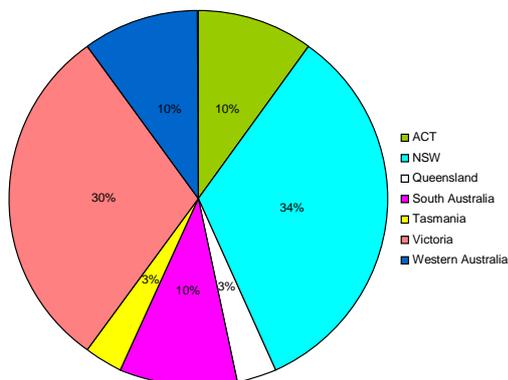
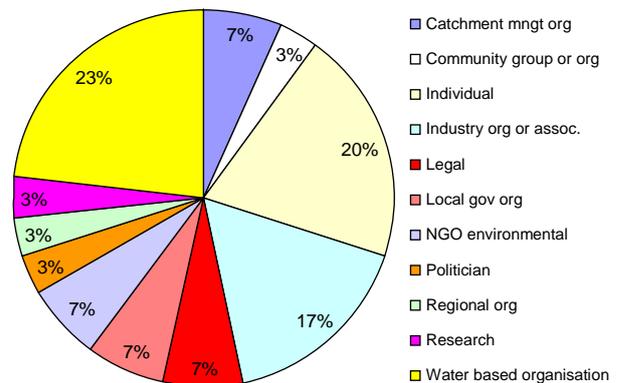


Chart 17: Public submissions that refer to water resource accounting according to sector



2.7.2. Comments on the implementation of this element

While less than a quarter of the submissions commented on this element, those that did strongly endorsed the need for good monitoring and accounting of Australia's water resources. The main issues covered were:

- adoption, or lack of it, of water accounting;
- indicators and benchmarking; and
- monitoring methods.

Adoption of water accounting

Among the submissions there is strong support for accurate and timely water accounting of Australia's water resources at appropriate scales to regional, State and national decision-making. Many of the submissions, however, expressed dissatisfaction to the extent to which the various jurisdictions had adopted such accounting practices. While some acknowledged the NWC's success in fulfilling accounting functions over which it has some control

(Engineers Australia), a number of submissions pointed to the lack of credible baseline data held by the relevant State authorities. NSW, Tasmania, WA and Victoria in particular were identified as problematic.

Some of the submissions (Leaman, PGA, Western Sydney Regional Organisation of Councils, Lower Hawkesbury Nepean Water Users Assoc, Murray Irrigation Ltd) made specific reference to the need for accurate accounts of both surface water and groundwater resources. Preventing the over-allocation of water resources was the basis for a range of these submissions. A subset of submissions made explicit the need to maintain good accounts as the basis for preventing the potential over-allocation of groundwater/aquifer resources.

The level of transparency of current accounting systems within rural versus urban settings was a point of differentiation between two submissions (Northern Victorian Irrigators Inc and the Water Services Association of Australia). The former felt that current regional accounting lacks transparency and as a consequence irrigators have no confidence in the system. The latter, referred to 138 performance indicators established to underpin the National Performance Benchmarking Framework, arguing that “no other industry sector or utility provider discloses information to its customers and stakeholders in such a transparent and thorough manner as does the urban water industry.”

Indicators and benchmarking

Implicit in the notion of water accounting are performance indicators and benchmarks. A small number of submissions were explicit about this link (e.g. Engineers Australia, Murray Irrigation Ltd), specifically remarking on the need for accounts to be based on performance indicators that are meaningful to decisions and to establishing benchmarks so that performance can be measured against accredited implementation plans, targets, and in-field management systems such as in agriculture. Murray Irrigation Ltd noted, however, that while some work had started in this area, progress has been slow.

There is a view, particularly among the regional nrm bodies, that governments have been tardy in coming to agreement on common indicators of water quality and quantity, and that this has been a major impediment to effective monitoring. Others expressed concern that irrespective of the existence of benchmarks and indicators, inadequate resources are made available to either undertake the monitoring measurements or to adequately report against the findings.

The breadth of submissions supported the need for benchmarks and indicators to be fundamental to accounting systems taking into account both consumptive and environmental drivers of decisions.

Monitoring methods

Many submissions referred specifically to the need for uniform metering extractions of water resources from water bodies, including rivers, tributaries, groundwater and wetlands. Hastening the allocation of resources to improve the breadth and frequency of metering was a recurring theme. Engineers Australia acknowledged the work of the NWC to help cover gaps in water meter installation in rural areas. In a similar vein to comments made about indicators and benchmarking, however, some of the regional bodies drew attention to the lack of human resources available within government agencies to maintain equipment where it has been installed.

A range of submissions advocated the need for real-time monitoring technologies to be put in place, with a subset suggesting that the technologies currently available need improving,

both in terms of timeliness and accuracy. The Western Sydney Regional Organisation of Councils made specific reference to the need for models based on monitoring, and which are used to make assessments of water availability, should take into account global warming and potential erratic weather patterns.

2.7.3. Recommendations and suggestions for change

Recommendations made in submissions against this element were less philosophically or ideologically driven than against elements such as water allocation and pricing. Like component vii, dealing with fundamental knowledge and capacity, submissions referring to water accounting were made from the perspective of establishing baseline and up-to-date data so that debates, policies and decisions can be made from a basis of scientific independence and integrity.

A comprehensive listing of recommendations that were made in submissions is contained in an associated document. Some examples of the recommendations that were made are as follows:

- All states need to make more rapid progress in the measurement and accounting of water diverted from rivers, water stored in farm dams, river transmission losses and groundwater, and the installation of meters for users who are currently unmetered. (Murray Irrigation Limited)
- Accelerate the investment in systemic infrastructure such as water accounting, metering, data and data sharing as this infrastructure underpins the proposed national water management system including a robust national water market. (ALGA)
- Establish water accounting across the system that establishes points of over-allocation requiring buy back or adding water to the system. (John Clayfield)
- Supports real-time metering and accounting of all water extractions including interceptions of plantations as a basis for compliance with entitlements and resource management. (NSW Irrigators Council)
- Each catchment or plan must include a proper water ledger that includes all factors. (D Leaman)
- An 'initial' benchmark needs to be determined for the actual total surface and groundwater water availability or available catchment maximum water yields as a firm reference point for future and equitable long term management of the available water resource. (Lower Hawkesbury Nepean Water Users Association)
- In WA, the water accounting system should ensure that all water use is monitored to enable a common measure of equity between rural and urban areas. (Pastoralists and Graziers Association)

2.8 Urban water reform

The NWI will ensure healthy, safe and reliable water supplies; increase water use efficiency in domestic and commercial settings; encourage the re-use and recycling of wastewater; facilitate water trading between and within the urban and rural sectors; encourage innovation in water supply sourcing, treatment, storage and discharge; and achieve improved pricing for metropolitan water.

Related NWI objectives:

- viii. Policy settings which facilitate water use efficiency and innovation in urban and rural areas.

2.8.1. Public response

Only around 20 per cent of submissions addressed this element directly, although some rural-focused submissions made comparisons between urban and rural implementation of NWI elements and to the pace of reform across both sectors. Given the source of submissions was evenly divided between urban and rural respondents, it may be inferred that there is greater satisfaction, or less dissatisfaction, with urban water reform than with rural water matters. Significantly, the largest single group of respondents represented industry organisations and associations.

Chart 18: Public submissions that refer to urban water reform

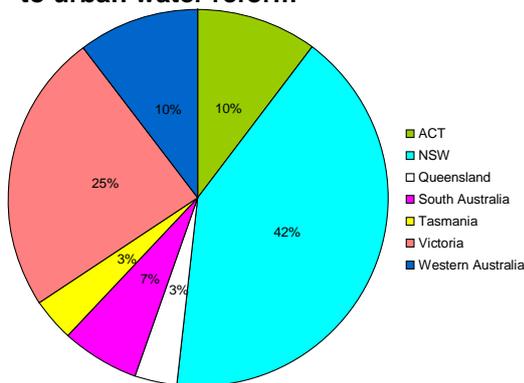
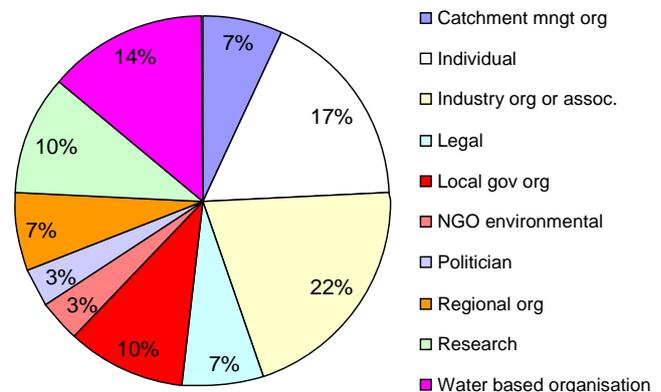


Chart 19: Public submissions that refer to urban water reform according to sector



2.8.2. Comments on the implementation of this element

The main urban water reform issues covered by the submissions were:

- pace of reform;
- urban design and planning;
- urban / rural interface; and
- recycling and urban water storage.

Pace of reform

A divergence of view was expressed in respect to the pace of water reform taking place within urban environments. On the one hand, a range of submissions written from a rural perspective suggested that the pace of urban water reform was impressive and worthy of emulation. The Water Services Association of Australia too noted the discrepancy in the pace of reform between urban and rural environments. It noted in particular the substantial

progress being made in minimising urban water leakage and in completing the stage two National Guidelines for Recycled Water relating to drinking water, aquifer storage and stormwater recycling due for completion in 2007. Indeed, the WSSA suggests urban water reform is provides good examples to promote to the Australian public the level of good progress being achieved.

On the other hand, some submissions, including those from Engineers Australia, expressed disappointment that the pace of reform fell significantly behind ambitious expectations and political aspiration. The Nursery and Garden Industry of Australia went further, arguing that urban water reform is the NWI's weakest area in terms of outcomes.

Most of the criticism directed towards the pace of urban water reform was not directly in relation to the NWI framework, but rather towards specific State governments or local councils. Industry organisations and individuals in particular pointed towards confusing and unsupportive local planning frameworks inhibiting reform, as well as to the lack of innovation in water supply sourcing, treatment, storage and discharge. Many submissions focused on the need to hasten recycling efforts and to provide and/or improve incentives to 'do the right thing' (see summaries following).

Some submissions acknowledged the role of NWI and NWC projects in contributing to urban water reform and urged that such support continue. Many of the projects referred to were about community education and advisory services, and are dealt with later in this report under the appropriate NWI element (Community Partnerships and Adjustment). Engineers Australia pointed to the positive contribution of sensitive urban design and water cycle management projects supported by the NWC.

Urban design and planning

Many submissions were scathing about the lack of good forward planning and water sensitive design across many urban constituencies. Perth and Sydney were particularly cited, but so too were a number of rural townships across Australia. Peri-urban environments were included by inference in a range of submissions. Some governments, such as the NSW State government, were accused of actively resisting large scale implementation of popular water management options like rainwater tanks and recycling in plans.

Of particular concern in some submissions was the poor alignment of plans to prospective water use requirements by a growing population. Some submissions argued that the notion of supply and demand for water held little or no place in the planning process. The Business Council of Australia also suggested urban water is currently priced as if it were plentiful, and so leading to demand exceeding supply even within the current population and infrastructure environment.

Other issues raised in relation to urban water planning have been discussed under the previous element dealing with water access entitlements and planning framework.

Urban / rural interface

A small number of submissions drew attention to water allocation and trading across rural and urban environments. In some cases, such as with Tree Plantations Australia submission, the response welcomed the opportunity to participate in trading between the rural and urban sectors. In other cases, such as the NSW Irrigators council, criticism was made at the lack of effort to prepare a water sharing plan for Sydney "despite supply difficulties and potential allocation". Submissions such as this and that of the Lower Hawkesbury Nepean Water Users Association, brought into sharp relief the growing issue of

conflicting water demands for consumptive purposes between rural and urban industries as well as between the rural and urban populations in general.

Another aspect of the urban / rural interface issue implicit in many of the responses, including a large number of unclassifiable submissions, involved the transfer of water via massive infrastructure initiatives from one part of the country to another. A large proportion of submissions from individual citizens provided suggestions (in many cases accompanied by elaborate sketches and diagrams) for transferring water in particular from the tropical north to both the rural and urban populations of the south, although some involved other forms of infrastructure across a range of estuaries along the eastern and southern seabords of Australia. A smaller but notable number of submissions also supported the need for desalination technologies to be installed at different scales (supporting small townships and large cities).

Underpinning all these suggestions was the philosophical stance that to meet current and growing demands for water, total sources of water needed to be increased rather than the demand or wastage decreased.

Recycling and urban water storage

Also a point of focus for many individual submissions, as well as those from industry and other organisations, was the demand to hasten the level of recycling of water for industry, environmental and, to a lesser though still significant extent, drinking water purposes. State governments in particular were criticized for under-investment in the infrastructure required to support large-scale recycling of water in urban environments.

All levels of government, including local government, were criticized for the perceived lack of adequate incentives for households to install water tanks and a range of water-use efficient technologies. Some individuals, however, pointed out that the adoption of such technologies is part and parcel of being a good and responsible citizen.

2.8.3. Recommendations and suggestions for change

Many recommendations were directed towards this NWI element. A comprehensive listing of recommendations is contained in an associated document. Some examples of the recommendations that were made are as follows:

- Clarify the definition of outcomes in respect to urban water reform (Water Industry Alliance)
- For urban water, the priority is the introduction of effective and coordinated planning which recognises the relative benefits and costs of different supply and demand solutions in urban water. (Business Council of Australia)
- The NWI create incentives to encourage large scale recycling and to open up the recycling market to free competition. (Hunter Region Landcare Network)
- Effectively link rural and urban water supply systems, physically, legally and through appropriate and consistent pricing mechanisms to facilitate trading. (Land & Water Australia)
- In order to better realise the objectives and outcomes of the NWI, it is imperative that the right support, guidance and funding assistance are made readily available to those who are charged with implementing it. (LGA NSW)
- Waterless toilet systems should be encouraged more strongly. (Stewart McCallum)
- Further information should be made available on the costs and benefits of introducing

rainwater tanks in the residential sector, both as a retrofit option and for new developments. (Municipal Association of Victoria)

- Clearer direction should be provided in the Building Regulations on how to achieve water conservation at the time of new or re-developments. (Municipal Assoc of Vic)
- All alternative sources of urban water supply should be exhausted before governments seek to purchase additional water from irrigators. (NSW Irrigators Council)
- Implementing water reforms for urban users would benefit from the introduction of realistic price mechanisms rather than seeking to impose voluntary and mandatory demand restrictions. (Qld Resources Council)
- Promote the achievements made in urban water reform. (Water Services Assoc of Aust)

2.9 Knowledge and capacity building

The NWI identifies areas where there is significant knowledge and capacity building needs for its ongoing implementation. Signatories to the Initiative have agreed to identify the key knowledge and capacity building priorities needed to support ongoing implementation of the Agreement, and identify and implement proposals to more effectively coordinate the national water knowledge effort.

2.9.1. Public response

All states and sectors are represented in the responses on the NWI element. Industry associations and individuals made up around 40 per cent of the responses. All organisations with a role in undertaking research and development responded to this element, although this only represents 4 per cent of the total response rate. Many of the responses indicated the close relationship between this and all other elements, although the link is particularly strong with the water resource accounting element, presumably on the basis of the need for good technical capacity to underpin the accounts.

Chart 20: Public submissions that refer to knowledge and capacity building

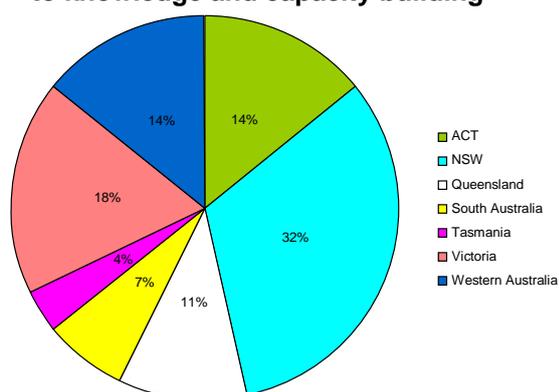
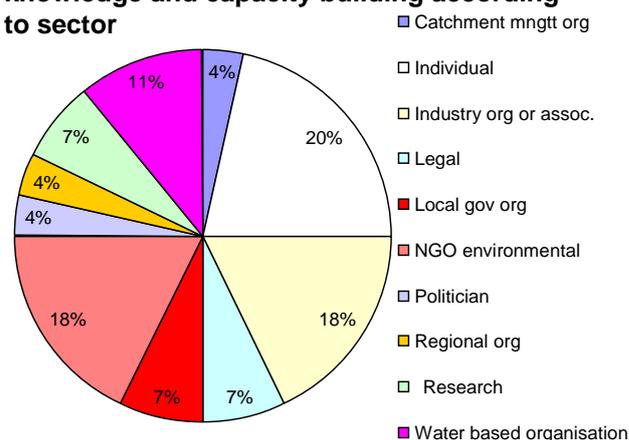


Chart 21: Public submissions that refer to knowledge and capacity building according to sector



2.9.2. Comments on the implementation of this element

This and the next element, *community partnerships and adjustment*, might be considered cross-cutting themes as they are relevant to the successful implementation of the previous six elements. Two submissions in particular suggested that this element is an area that needed further clarity of purpose and guidance from the NWC (Leaman and Land & water Australia). Irrespective, the main issues covered by the submissions were:

- institutional capacity and resources;
- research and development; and
- promotion and education.

Institutional capacity and resources

Several submissions commented on the lack of both office and in-field capacity within the institutions charged with implementing the NWI elements. In particular, the lack of capacity to acquire data and to observe and monitor water resources to underpin and ground-truth

modeling were highlighted. The Water Services Association of Australia suggesting that the lack of appropriate staff resources undermined the capacity of organisations to undertake the significant planning exercises required to underpin water reform. Local government capacity building was highlighted by the Western Sydney Regional Organisation of Councils as critical, but needed to be handled sensitively so as not to burden councils with additional demands on their limited resources.

A number of submissions also drew attention to the need for water resource authorities to employ a wider range of expertise, including ecological and social-science-based disciplines, throughout the internal hierarchies. Implicit in some of the submissions was the view that there is a bias within some water authorities towards the expertise required to deal with industry and production issues and less so ecological and environmental issues. Land & Water Australia highlighted the need to consider social research as an important element in managing water resources.

Some submissions, notably from those representing regional NRM bodies, suggested that community groups, including Landcare groups offer a potential network of on-ground expertise to assist in the implementation of NWI activities, although would require appropriate resources and support. The Australian Landcare Council cautioned that community groups should be supported for what they do best, which is implementing improved management techniques to ensure the most efficient use of water rather than be heavily involved in national water policy.

Research and development

While a range of submissions commented on the need for invest in R&D to improve the timeliness and accuracy of water accounting, a fewer number commented on the broader range of issues relating to water resources research and development. Indeed, there was a notable lack of submissions from research organisations despite the number of cooperative research centres and university departments dedicated to water resources.

The support for research to underpin water accounting can best be summed up by Tree Plantations Australia: "Further research and capacity building is critical, particularly to accurately determine water use and thresholds across jurisdictions.

The few submissions that commented on the broader aspects of research supported a stronger ecological basis for decision-making (ie Lake and Bond). Not unrelated to this were submissions that sought a better understanding of groundwater resources in general, and in some case the relationship and interactions between aquifers, groundwater and surface water resources.

Several submissions made by individuals suggested that Australia's agricultural industries need to be more aligned to the Australian environment. Implicit in these submissions was a call for development of new types of industries or new ways of undertaking traditional industries that would consume less water and be more ecologically sustainable.

Benchmarking and applying best management practice to water use efficiency was raised by a number of submissions, implying the need for a greater level of adoption of current knowledge. While most of these submissions related to agriculture, one individual suggested that the concept of best practice needed to be embedded into water authorities, stating that "efficiency should be compared with the best private enterprise water suppliers and not other State water monopolies."

Promotion and education

Making information on water resources readily accessible was considered critically important in some submissions. Some State authorities were recognised as having good datasets, but not the appropriate technologies to make data or information available to industry bodies, researchers or the wider public.

The Smart Approved Water Mark Program was cited by the Nursery and Garden Industry Australia as an excellent initiative with positive NWI outcomes. Its consumer-friendly interface was highlighted as being particularly effective in providing products to conserve water and educate consumers. The Bondi Group suggested the need to promote and celebrate the NWI's success stories so that progress on water reform is heard more widely.

2.9.3. Recommendations and suggestions for change

Many recommendations were directed towards this NWI element. A comprehensive listing of recommendations is contained in an associated document. Some examples of the recommendations that were made are as follows:

- Policy makers must have a deep understanding of the complex nexus of environmental, economic and social systems in order to develop high-quality water management strategies. (Australian Landcare Council)
- The roles, responsibilities and accountabilities of the NRM regions with respect to environmental (and all other) considerations in water management are extremely variable and poorly understood across the states and territories. These need to be clearly articulated and the NRM regions need to be empowered and resourced to help implement national water policy where appropriate. (Australian Landcare Council)
- Re-introduce specially trained extension officers for 'on ground' discussions. (VD Burnett)
- More reliance on a truly independent system of assessment of environmental and other impacts before the approval of activities that may have a significant impact on water availability or quality. (Hunter river Regional Landcare Network)
- Clarify where the NWC sees NWI knowledge gaps lying in order to assist those agencies with similar investment interests identify alignment or opportunities for collaboration, and avoid duplication of effort (Land & water Australia)
- Important role for CMAs in assisting national and state efforts to improve knowledge and capacity building (Lower Murray CMA)
- Learn from the local government sectors experience and leadership in water conservation and sustainable urban water management. (Municipal Assoc of Vic)
- Provision of weekly resource updates in order to assist the irrigation corporations and shareholders with water use decision making. (Murray Irrigation Ltd)
- Address skill shortages in water planning and management authorities. (Water Services Assoc of Aus)

2.10 Community partnerships and adjustment

Government are to engage water users and other stakeholders in achieving the objectives of the Initiative by improving certainty and building confidence in the reform processes; transparency in decision making; and ensuring sound information is available to all sectors at key decision points. New and improved measuring, monitoring, reporting and accounting procedures will be introduced, and improved public access to information will increase public acceptance of the Initiative.

Related NWI objectives:

- ix. Addressing future adjustment issues that may impact on water users and communities.

2.10.1. Public response

Almost half of all submissions made direct or indirect reference to this element, with all sectors providing comment. Notable, however, in proportion to the total submissions received from individuals, this group was less concerned, or at least commented less, on community partnerships than did formal organisations. This element in particular was a major focus of the survey, and hence conclusions in this area need to be considered in conjunction with the survey results.

Chart 22: Public submissions that refer to community partnerships and adjustment

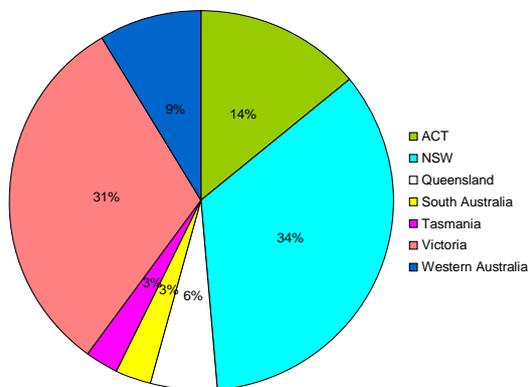
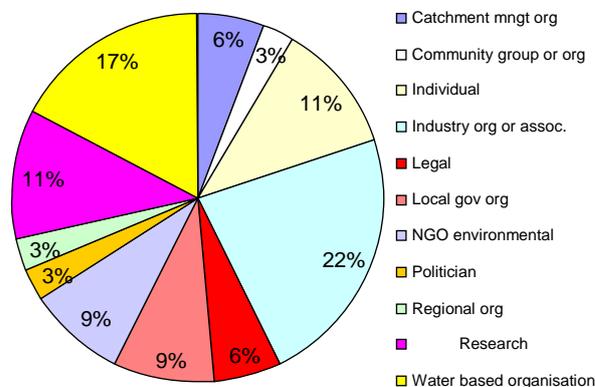


Chart 23: Public submissions that refer to community partnerships and adjustment according to sector



2.10.2. Comments on the implementation of this element

As with the previous element, this element shares a relationship across all others. The main issues covered by the submissions were:

- consultation and transparency of process
- participation and partnerships; and
- community and industry adjustment.

Consultation and transparency of process

The importance of community consultation and awareness in respect of NWI activities is best summed up by the Consumer Action Law Centre: “The NWI’s effectiveness to contribute to a change in consumer behaviour with respect to water use, and to ensure that the social objectives of the NWI are met, will be significantly hampered without improved consumer and community consultation. Other submissions argued that consultation is required to underpin good planning, effective implementation of projects or both.

A number of issues highlighted the need for consultation to be objective, transparent and broad-based. For example, Engineers Australia argued that communities need to be engaged in discussion of all issues and not just those considered acceptable by utility managers and political leaders. On the other hand, some individuals claimed that certain State agencies are influenced by the persistent lobbying of sectoral interests.

The Government of Western Australia, NSW and Tasmania were specifically identified as performing poorly in respect to adequate consultation and stakeholder engagement.

A number of submissions dealt with the issue of targeting consultation more effectively so that those with a direct stake in specific water issues are consulted directly rather than through surrogates or broad-based community or regional organisations. The Lower Murray Catchment Management Authority, for example, argued that it was not necessarily the best vehicle for broader community consultation on water policy issues. Similarly, the Northern Victorian Irrigators Inc was concerned that broad-based farmer organisations were consulted without regard to whether they had the support of all its constituents. It was also concerned that consultation was potentially undertaken more to ensure the legalistic boxes were crossed than to seek genuine community engagement in water reform.

The Southern Rivers Catchment Management Authority put forward a similar line of argument, suggesting consultation specifically in respect of the NWI needed to be broad-based so that the NWC did not simply get positive reinforcement from like-minded agencies, or be unduly influenced by the very agencies it was attempting to reform. Likewise, the Wilderness Society noted that while the NWI recognises Indigenous representation in water planning processes, this recognition does not necessarily translate into positive outcomes for Indigenous traditional owners.

Transparency in decision-making was viewed as a shortcoming in some submissions. Withholding information or making it difficult to obtain was observed by industry groups and some individuals. Tree Plantations Australia was also concerned that the process of consultation by some authorities was poorly undertaken, with agency positions sometimes not made transparent until too late in the process.

Local government stakeholders suggested in their submissions that they have felt disengaged with the NWI process, with the State governments taking the lead role. Local governments believe they have a crucial role to play with the special relationship they have with rate payers and consumers.

Participation and partnerships

The previous element, concerned with knowledge and capacity, dealt with the resourcing issue associated with active community participation in NWI initiatives.

Community organisations at the regional, catchment and local level highlighted in submissions the potential to contribute to on-ground change in respect to NWI elements by offering access to their networks. It noted that community groups had participated in the

development of the first round of water sharing plans, but had not been engaged with the second round (“expert panel”) process.

Community and industry adjustment

Very few submissions dealt directly with adjustment issues, although there was implicit acknowledgement that such adjustment takes place through the water reform process, particularly through water allocation and trading arrangements.

That said, the Consumer Action Law Centre suggested that the NWC appears to view adjustment solely in terms of water access entitlements, while in reality there are significant adjustment issues for residential consumers that require addressing. The Australian Local Government Association stated that it is important to consider social impact of water reform proposals at the planning stage.

2.10.3. Recommendations and suggestions for change

Many recommendations were directed towards this NWI element. A comprehensive listing of recommendations is contained in an associated document. Some examples of the recommendations that were made are as follows:

- Clarify and recognise the various roles of stakeholders in a revised NWI, thereby reducing the risk that NWI initiatives will be compromised or fail to meet expectations during implementation (Aust Academy of Technological Sciences and Engineering)
- The NWI be used to improve water businesses’ customer consultation processes. (Consumer Action Law Centre)
- Individual water users should not bear the full brunt of the cost of meeting community aspirations away from development and towards greater conservation (ICM Agriculture)
- The three levels of government work together and with the community to identify actions necessary for achieving a secure and affordable water supply into the long term future. (Municipal Assoc of Vic)
- The NWC to engage with irrigators’ organisations beyond the irrigation corporations as a large proportion of NSW irrigators are not members of the corporations. (Murrumbidgee Private Irrigators)
- NWC take immediate action to ensure uniform and equitable rating policies are introduced Australia-wide and that these policies protect the integrity of local government revenue bases, while ensuring the burden of rate collection is equitably spread across all ratable properties. (NSW Irrigators Ltd)
- Local governments be given a dispensation to develop a formula that allows the rating base to resemble the rating base prior to the separation of water entitlements and land property rights. (NSW Farmers Assoc)
- That relevant Governments institute a broad-based program of engagement with Indigenous people to develop a national plan for the conservation and management of Northern Rivers. (The Wilderness Society)
- That relevant Governments invest in Indigenous communities to facilitate Aboriginal conservation strategies, fee-for-service environmental protection, and sustainable enterprise opportunities. (The Wilderness Society)

2.11 Comments on other NWI aspects or water issues

2.11.1. Public response

There are 40 submissions that do not specifically address the NWI's elements, but comment on other aspects of Australian water management, the NWI or provide suggestions for solving water issues.

Chart 24: Public submissions that refer to non-specific topics associated with water issues

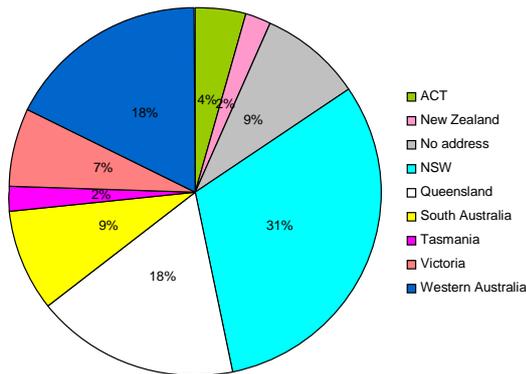
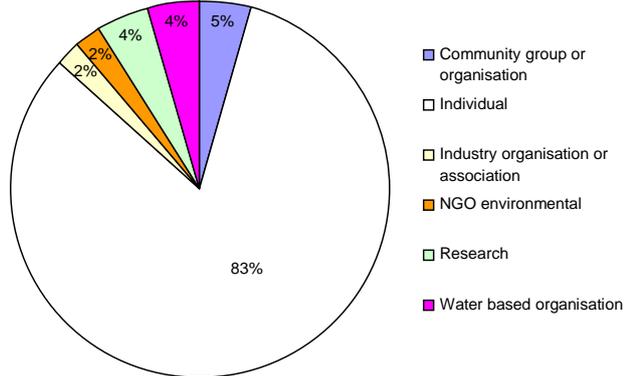


Chart 25: Public submissions that refer to non-specific topics associated with water issues according to sector



2.11.2. Comments on the implementation of this element

The following provides an outline of comments and suggestions made.

Enhancement of water supply

A very wide range of suggestions are made to enhance both urban and rural water supplies.

Dams

These include the construction of more dams (e.g. in northern Queensland) or extension or de-silting existing dams, particularly while water levels are low. However, some submissions strongly oppose further dam construction in Australia with several advocating the removal of weirs to allow rivers to flow more naturally.

Harvesting stormwater

This is a frequent suggestion in the submissions with some specific proposals such as the Cheltenham Park Residents Group which proposes a stormwater management project for the Lower Torrens River Catchment area and Adelaide's western plains that demonstrates water harvesting and aquifer storage and reuse in order to achieve zero waste of storm water. The Yorke Regional Development Board also supports greater use of rainwater and stormwater collection and reuse, supplemented by effluent treatment and desalination.

Recycled water

Use of water recycled from treated sewerage and industrial uses is suggested by a number of submissions. Several submissions strongly oppose the domestic use of recycled sewerage water or using it to replenish aquifers, but support its use in agriculture, parks and gardens and industrial uses.

Desalination

This is another popular suggestion with some advocating large-scale desalination plants in areas of least cost. Various proposals on the use of desalinated water are given including direct supply to potable sources and transferring desalinated water to stressed rivers. Some submissions, however, oppose desalination plants on environmental grounds (e.g. disposal of highly saline residue) and perceive high energy-use. Other submissions suggest that high energy usage problems could be overcome by powering desalination plants with solar energy or wavepower.

Some specific proposals are provided including a proposal from the Goldfields Esperance Development Corporation to pipe desalinated water from Esperance to Kalgoorlie-Boulder; a distance of 400 kilometres. The desalination plant and pipeline would deliver up to 100ML of fresh water per day which is almost three times the water currently available to the Goldfields through the Mundaring pipeline. The cost of the project is estimated at \$400 million.

Redirection of water from northern Australian rivers and water sources

Piping water from Lake Argyle to Perth or into the Murray Darling system is advocated by several submissions. Other submissions suggest linking rivers which flow in the Gulf of Carpentaria (e.g. the Flinders River) with Queensland rivers which flow south through the Channel Country to Lake Eyre. Another submission (Cooper) proposes a scheme to supply water-deficient areas of Queensland by piping water from the Jardine River on Cape York Peninsula. The source of water for the river is claimed to be a large Basin under New Guinea.

Water efficiency measures

Many submissions call for greater attention and action in improving water use efficiency in rural and urban areas. For irrigated agriculture, this includes switching from 'flood' irrigation to more efficient methods and several advocate the relocation of high water use crops to northern Australia. Some submissions suggest soil amelioration particularly from green 'waste'.

For urban areas there is a strong call for greater water use efficiency for public parks and gardens and in households. Measures advocated for households include water diverters to save cold water prior to hot showers, sensor flow taps, infinity hot water systems, pipe insulation and AAA shower heads. There are other suggestions to make alternative types of water available for different consumptive uses with the highest quality being for drinking and lower quality for all other domestic consumption.

Awareness and education of urban consumers and children

Many submissions commented on the need for education of water consumers and particularly children to ensure a more sustainable water future. For example, Bunce suggests that all Australians need to be much more interested and more aware of our arid climate and limited fresh water resources. She encourages everyone to pause and critically consider our "over zealous expectations, particularly our industrial and our commercial water expectations." Bunce advocates altering the basis of water governance to achieve much more sustainable, secure and available fresh water gains for our future water needs, especially for our children's water requirements.

Coe believes that a negative negative mindset currently prevailing in Australia is limiting our capacity to make adequate provision for steady water supplies across Australia. He advocates a change in emphasis of strategic water strategies from restrictive containment

practices to long-term sustainable water generation strategies. Coe proposes a focus in research programmes on economic, environmental and energy issues specific to Australian strengths such as dryland farming, improved desalination technology, and sunrise technologies for water generation and conservation.

A strong opinion is presented in a number of submissions that the solutions to Australia's water problems should rest with local communities helped by government guidance and policy.

3. Survey responses

Full detail of the survey responses is provided in the accompanying report: *Summary and analysis of survey responses to NWI public submission process*.

Appendix A: Example of advertisement



Australian Government
National Water Commission

CALL FOR PUBLIC SUBMISSIONS

FIRST BIENNIAL ASSESSMENT OF THE NATIONAL WATER INITIATIVE

The National Water Commission is inviting submissions from the public as part of the first biennial assessment of the National Water Initiative (NWI). The NWI is an inter-governmental agreement between the Australian and State and Territory Governments and represents their shared commitment to water reform. Information about the NWI can be obtained from www.nwc.gov.au/nwi.

There is no set format for submissions, although the Commission is keen to receive feedback in respect to any or all of the eight NWI priority elements of water management (outlined in the web link provided). All submissions received will be made publicly available on the Commission's website unless marked 'Confidential'.

Please email (in Word and/or PDF format), fax or mail your submission, by **19 February 2007**, to:
Kiri-ganai Research Pty Ltd
GPO Box 103 CANBERRA ACT 2601
Tel: 02 6295 6300
Fax: 02 6232 7727
Email: submissions@kiri-ganai.com.au

The Commission is committed to workplace diversity

hwa007453



Appendix B: Letter of invitation

Date

Address

Dear #

First Biennial Assessment of the National Water Initiative Call for public submissions

I am writing on behalf of the National Water Commission to invite your organisation to comment on the progress of the National Water Initiative (NWI).

As you know, the NWI is an inter-governmental agreement between the Australian and State and Territory Governments and represents their shared commitment to water reform. Introduced in 2004, the Agreement included a requirement, commencing in 2006–07, to undertake biennial assessments of progress with the NWI and State and Territory implementation plans. The assessments are also intended to seek advice on actions required to better realise the objectives and outcomes of the Agreement. Information about the NWI, including its objectives, outcomes and elements, can be obtained from the National Water Commission's website (www.nwc.gov.au/nwi), or on request from the contact details provided below.

As the lead agency overseeing the implementation of the NWI, the National Water Commission is now inviting submissions from the public as part of the first biennial assessment. This invitation is open to individuals, companies, NGOs, catchment management groups, industry organisations, public utilities, government authorities, agencies and councils of any jurisdiction, and other entities wishing to make comment on the performance of the NWI. There is no set format for submissions, although the Commission is keen to receive feedback in respect to any or all of the eight NWI priority elements of water management.

Submissions will be independently received, collated and summarised by Kiri-ganai Research Pty Ltd to ensure objectivity in the reporting. Issues raised in the submissions will be drawn on in the overall assessment of the NWI for consideration by the Council of Australian Governments. The Commission is aiming to finalise the assessment by mid 2007. All submissions received will be made publicly available on the National Water Commission website unless marked 'Confidential'.

How to make a submission

Please email (in Word and/or PDF format), fax or mail your submission, **by 19 February 2007**, to:

Kiri-ganai Research Pty Ltd
GPO Box 103
CANBERRA ACT 2601
Tel: 02 6295 6300
Fax: 02 6232 7727
Email: submissions@kiri-ganai.com.au

All submissions will be acknowledged within 24 hours of receipt.

Obviously the Commission would appreciate a submission from your organisation. However, if you are unable to provide a detailed written submission, please consider at least completing and returning the short survey form enclosed with this letter.

Yours sincerely

Dr Richard Price
Managing Director
Kiri-ganai Research Pty Ltd

Appendix C: Survey form

Survey: Progress with implementation of the National Water Initiative

(All survey information provided will remain confidential and you may request that your identity be withheld from the National Water Commission. Survey results will be aggregated when presented to the NWC and this will further protect the identity of respondents.)

1. Respondent's name:
2. Respondent's address or, if representing an organisation, its name and address:
Would you like your identity to be withheld from the NWC?	YES <input type="checkbox"/> NO NEED <input type="checkbox"/>
3. What kind of institution best describes your organisation?	Research <input type="checkbox"/> Community <input type="checkbox"/> Private Individual <input type="checkbox"/> Catchment Mngt <input type="checkbox"/> Industry <input type="checkbox"/> NGO <input type="checkbox"/> Gov't <input type="checkbox"/> Other <input type="checkbox"/> (please specify).....
4. The National Water Initiative is aimed at improving Australia's water management. What do you see as critical to the improved management of water in your region, jurisdiction or field of interest?
5. What has been your, or your organisation's, involvement in or interaction with the National Water Initiative?
6. Was this involvement or interaction positive?	YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
7. In what way/s was the involvement or interaction positive or negative?

8. In what way/s can your organisation's involvement in the National Water Initiative be improved?				
.....					
9. Tick the box that best describes your opinion of the National Water Initiative's progress in the following areas.	Excellent progress	Good Progress	Moderate progress	Unsatisfactory progress	Not sure
l) Clear and nationally-compatible characteristics for secure <i>water access entitlements</i> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Transparent, statutory-based water planning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) Statutory provision for <i>environmental and other public benefit outcomes</i> , and improved environmental management practices.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o) Complete the return of all currently over-allocated or overused systems to <i>environmentally-sustainable levels of extraction</i> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p) Progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q) Water pricing that promotes economically efficient and sustainable use of water resources, water infrastructure and government resources devoted to management of water.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r) Clarity around the assignment of risk arising from future changes in the availability of water for the <i>consumptive pool</i> .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s) Water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t) Policy settings which facilitate water use efficiency and innovation in urban and rural areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u) Addressing future adjustment issues that may impact on water users and communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v) Recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. What improvements do you suggest could be made to the National Water Initiative?				
.....					
11. Have you any other comments in regard to implementation of the NWI?				
.....					

Appendix D: List of submissions

* Confidential (submissions not placed on NWC website)

Name	Company	State
Alan Mowbray		WA
Richard (Stretch) Devine		Qld
Mrs Roslyn Healey		NSW
Stephen Royall	Illawarra Newspaper Holdings	NSW
Chris Rawlings *		QLD
Ninian Struthers		NSW
Stephen Thornton		WA
Adrian Le Gay Brereton		NSW
Daniel Endicott		NSW
W H Holmes		SA
Lance W Cooper		QLD
Bill Mobbs		NSW
Ian Thomas		NSW
Maria Tarrant	Business Council of Australia	VIC
Haikai Tane	Watershed Systems	NEW ZEALAND
John Chrzanowski *		VIC
Paul Rasmussen	Lower Nepean Hawkesbury Water Users Assoc	NSW
Anonymous		VIC
Graham Doran	Vin Con Viticulture Consultants Pty Ltd	NSW
R W Clay		NSW
Dr D E Leaman	Leaman Geophysics	TAS
L T Goode		WA
Brian Stevens		SA
Alan Hoppe, Regional Director	ICM Agribusiness	NSW
Wendy Bunce		NSW
David Tannahill		VIC
Peter Stockings	Yorke Regional Development Board	SA
Barbara Dunnet	Scott River Growers Group	WA
Maria and Doug Tidd		SA
Prof P S Lake and Dr N Bond	Monash University School of Biological Sciences	VIC
David Williamson		NSW
John McCarthy	Water our Garden City Inc, President	ACT
Adrian Watkins	Natural Habitats	SA
Terry Dwyer	ANU Visiting Fellow Crawford School of Econs & Govn	ACT
Manu Saunders	Student	No address
Robert Hicks, CEO	Goldfields Esperance Devel Corp	WA
Llewellyn Jones		QLD
Heather Lucke	East End Mine Action Group Inc	QLD
Jim Faggotter		QLD
Bruce Manning, CEO	Great Southern Develop Corp	WA
Graham McDonald	Soaring Eagles Ministries	VIC
Bill Symonds		No address
Jim Collier		TAS
Peter Gately		ACT

Gary Verri		NSW
Coral Talbot		NSW
John Coe		WA
Deborah Williams		NSW
J G Waters		WA
Max Talbot		NSW
Ross Young	Water Services Assoc of Aust	VIC
Ron & Sylvia Draper		QLD
Sandra Hardiman, Sec	Croydon Conservation Society	VIC
Neil Fisher, CEO	Forest Industry Water Policy Group	ACT
Barbara Day		No address
Acacia Rose		NSW
Tim Creeper		SA
Ron Fenwick		NSW
Rob Helsby *		VIC
John Daniels		
Stuart McCallum	Grassy Woodland Ecology	VIC
Peter Glover		WA
Maureen Campbell, President	Waterbird Conservation Group Inc	WA
James Child		NSW
John Edwards, Secretary	Clarence Environment Centre	NSW
Mrs V D Burnett		QLD
Ray Hill		SA
Andre Kaspura	Engineers Australia	ACT
Lee Furness CEO	Murrumbidgee Private Irrigators	VIC
Steve Meadows	Hunter Region Landcare Network	NSW
Vaughan Beck	ATSE	VIC
Liz Penfold	Member for Flinders	SA
Warwick Tudehope	Alinta	NSW
Ashley Bastock	Tasmanian Farmers and Graziers Association	TAS
Robert Prince	Nursery & Garden Industry, Aust	NSW
David Williams	Water Industry Alliance	SA
Elissa Freeman	Public Interest Advocacy centre	NSW
Ben Thunder	Pastoralists & Graziers Assoc of WA	WA
Gerard Brody	Consumer Action law Centre	VIC
John Clayfield		SA
Don Spice		WA
Alan Hill		WA
Beatrix Brice	Queensland Resources Council	QLD
Catie Wood JP	Aust Federation of Civil Celebrants Inc	WA
Garry Duke	Northern Vic Irrigators Inc	No address
Trish Hurst		WA
Matt Williams, Chairman	Plains Water Limited	VIC
Stephen Carroll	Australian Bankers' Assoc Inc	NSW
Rachel Walmsley	Environmental Defender's Office	NSW
Glenn Walker	The Wilderness Society	QLD
John Pritchard	Aust Local Government Assoc	ACT
Gerard Flood	Isaacs & Hotham Fed Electorate Group	VIC
C L Spowart		VIC

James Nisbet		QLD
Ryan Pascoe	Western Syd Reg Org of Councils Ltd	NSW
Nina Rogers	Municipal Assoc of Vic	VIC
Lee Godden Assoc Prof	Uni of Melbourne, Law School	VIC
Catherine Norwood/George Warne	Murray Irrigation Ltd	NSW
Trevor White	Cheltenham Park Residents Group	SA
Renee Barbaro	LGA of NSW and Shires Assoc of NSW	NSW
Dr Michael Robinson	Land & Water Aust	ACT
Allan Hansard, CEO *	Tree Plantations Aust	ACT
Mark King, Chair	Lower Murray Darling CMA	NSW
Jock Laurie, President	NSW Farmers Assoc	NSW
Pam Green, Chair	Southern Rivers CMA	NSW
Scott Wyatt, Exec Officer *	Australian Landcare Council	ACT
Brendon Sydes	Environment Defenders Office (Vic)	VIC
Doug Miell, CE	NSW Irrigators' Council	NSW
Geoff Calder, Vice President	The Bondi Group	WA