



# **A NATIONAL PLAN FOR WATER SECURITY**

**25 January 2007**

# A NATIONAL PLAN FOR WATER SECURITY

## FOREWORD

The drought which now grips large parts of Australia is the most severe since records began.

It has taken a drastic toll on the lives and livelihoods of many Australians.

Whether in the city or in the bush, communities are understandably anxious about water, concerned about getting through our present difficulties, and worried about what the future might hold.

In the face of this protracted drought and the prospect of long-term climate change we need a radical and permanent change in our water management practices.

That is why I am proposing a \$10 billion, 10 point plan to improve water efficiency and address over-allocation of water in rural Australia.

The Plan includes:

1. a nationwide investment in Australia's irrigation infrastructure to line and pipe major delivery channels;
2. a nationwide programme to improve on-farm irrigation technology and metering;
3. the sharing of water savings on a 50:50 basis between irrigators and the Commonwealth Government leading to greater water security and increased environmental flows;
4. addressing once and for all water over-allocation in the Murray-Darling Basin;
5. a new set of governance arrangements for the Murray-Darling Basin;
6. a sustainable cap on surface and groundwater use in the Murray-Darling Basin;
7. major engineering works at key sites in the Murray-Darling Basin such as the Barmah Choke and Menindee Lakes;
8. expanding the role of the Bureau of Meteorology to provide the water data necessary for good decision making by governments and industry;
9. a Taskforce to explore future land and water development in northern Australia; and
10. completion of the restoration of the Great Artesian Basin.

Implementation of the Plan will benefit millions of Australians.

Its success relies on an acceptance by state and territory governments that a problem of this magnitude can only be solved if we work together as Australians.

The \$10 billion plan I have outlined will only work if the governance arrangements for the Murray-Darling Basin are placed on a proper national footing. The proposal is conditional on this occurring.

Water scarcity is a major national challenge and there will be other challenges we must confront in the years to come. However, with the resilience, adaptability and boldness Australians have shown in the past, they can be overcome.

A handwritten signature in black ink, reading "John Howard". The signature is written in a cursive, flowing style with a large initial 'J'.

The Hon John Howard MP  
Prime Minister  
25 January 2007

## A NATIONAL PLAN FOR WATER SECURITY

The severity of the drought in south eastern Australia has underscored the importance of making the best use of our water resources.

The water resources of the Murray-Darling Basin (MDB) - traditionally the breadbasket of the nation - are significantly over-allocated. State and territory governments have in a number of catchments issued more entitlements to water than can be supplied on a sustainable basis.

The CSIRO predicts that in coming decades, average inflows to the MDB will decrease even further. There is emerging evidence of a steep reduction in rainfall, which will reduce inflows into storages. Bushfires and the unregulated growth in farm dams, bores and reforestation are all reducing available water resources.

While a number of these risks can be managed through improved planning and compliance regimes, some cannot be controlled. We must therefore address both existing over-allocation as well as face up to the likelihood of reduced inflows in the future. We must adapt by reducing the use of water, and use what we have more efficiently.

At a time when the imperative for more efficient water use is clear, the nation's largest water user - the irrigation sector - faces uncertainty and a difficult outlook for infrastructure investment.

The National Plan for Water Security (the Plan) outlined below is a bold, new approach designed to ensure rural water use is placed on a sustainable footing within the next decade. It builds on work begun under the Living Murray Initiative and the Australian Government Water Fund. The Commonwealth Government will invest \$10 billion over 10 years to significantly improve water management across the nation. There will be a special focus on the Murray-Darling Basin Commission (MDBC), where the bulk of our agricultural water use takes place.

The Plan will put irrigators on a more sustainable basis nationally by providing them with incentives to adopt more modern and efficient practices, resulting in greater efficiency and flexibility.

The Plan substantially addresses over-allocation in the MDB with the objective of putting the MDB back on a sustainable track, significantly improving the health of the rivers and wetlands of the Basin, and bringing substantial benefits to irrigators and the community alike.

It proposes new governance arrangements for the MDB to ensure decisions affecting it are made promptly and with a Basin-wide perspective.

The Plan will greatly improve our understanding of water resources nationally, including in northern Australia, and lay the groundwork for more timely decision making in the future.

The Plan will also accelerate the implementation of the National Water Initiative (NWI), which is the blueprint for water reform nationally. The Plan offers concerted action on issues important to all Australians.

A properly functioning MDB makes a significant contribution to the nation.

More broadly it will help ensure irrigated agriculture across Australia is sustainable. By working in tandem with the Plan, risk sharing arrangements under the NWI will make certain that the MDB is kept on a sustainable footing.

### **Modernising Irrigation**

A cornerstone of the package is a commitment of almost \$6 billion over 10 years to modernise irrigation infrastructure both on- and off-farm to save water and increase efficiency of water use. This will lead to more efficient, productive and profitable use of water with a view to maintaining the value of irrigated production in the face of declining water availability.

Key actions include:

- piping or lining channels and adoption of more efficient watering methods to achieve on- and off-farm efficiency gains;
- the adoption of more accurate water meters to improve measurement; and
- improving river operations and storage management, for example, by reducing evaporation at some storages in the lower MDB.

While individual irrigators and water providers respectively will be asked to contribute to the on- and off-farm efficiency savings projects and to metering, they will be able to keep half of the water savings.

### **Addressing Over-allocation**

Under the Plan, the Commonwealth Government will invest up to \$3 billion over 10 years to address over-allocation in the MDB. Planned in conjunction with the modernisation programme, this will be achieved by providing assistance to irrigation districts to reconfigure irrigation systems and retire non-viable areas (such as those at the end of isolated channels or in salt affected areas).

Assistance will be provided to help relocate non-viable or inefficient irrigators, or help them with exiting the industry. Where necessary, entitlements will also be purchased on the market.

Water that accrues to the Commonwealth Government through these measures will be managed to restore the health of the rivers and wetlands in the MDB. The counter-cyclical nature of environmental watering will also allow some water to be made available to irrigators during dry periods.

## **New Governance Arrangements in the MDB**

New governance arrangements are needed for water management in the MDB, to ensure that the benefits of the Plan are not undermined by poor decisions in future. Existing arrangements centring on the MDB Agreement and the MDB Ministerial Council are unwieldy and not capable of yielding the best possible Basin-wide outcomes. One government needs to take control and be responsible for water management in the MDB to ensure key Basin-wide outcomes are realised.

The Commonwealth Government will seek the agreement of New South Wales (NSW), Victoria, Queensland, South Australia and Australian Capital Territory (ACT) governments to transfer all their powers in relation to the Murray-Darling Basin Commission (MDBC) to enable the Commonwealth Government to oversee water management in the MDB.

In the interests of the efficient operation of the major river systems of the southern MDB (the Murray, the Murrumbidgee and the Goulburn Rivers) the Commonwealth Government will also seek the transfer of powers from Victoria and NSW respectively to allow it to manage and operate the Goulburn River and Murrumbidgee River. This will allow the new Commission to operate the key rivers in the southern MDB in an integrated way.

Under this proposal, the Commonwealth Government will reconstitute the MDBC as a Commonwealth Government agency reporting to a single minister. The new Commission would have responsibility for setting a sustainable cap on the extraction of surface and ground water within the Basin, and accrediting catchment and aquifer water plans to ensure they comply with that cap.

These new arrangements are expected to cost an additional \$600 million over 10 years.

This is a key element of the Plan, without which its overall objectives will not be realised. The whole Plan is therefore contingent on state and territory governments' agreement to this proposal. The Prime Minister will be writing to the Premiers of NSW, Victoria, Queensland, South Australia and the Chief Minister of the ACT within two weeks to detail the proposal.

## **Upgrading Water Information**

As water becomes more scarce and subject to greater demands, it is imperative that we can accurately measure and monitor the resource and its use. This applies equally at the national and basin scales, as well as for individual farms.

A national capacity for water data and forecasting services using common systems and standards is a priority. This will involve establishing new capacity in the Bureau of Meteorology (the Bureau) and will provide an improved basis for making informed policy decisions and judicious infrastructure investments. Critically, they will also enable us to evaluate progress being made in water

reform. The Commonwealth Government will put in place legislation for data collection and reporting standards which will be mandatory across the nation. This proposal will cost \$480 million over 10 years.

### **Northern Australia**

Much attention has recently been focused on the potential for water resource development in northern Australia. It is important that any development proposals are sustainable and based on the best information available. To this end, the Commonwealth Government will establish a Taskforce chaired by Senator the Hon Bill Heffernan to examine the potential for further land and water development in northern Australia. This will be informed by a Northern Australia Land and Water Futures Assessment.

### **Great Artesian Basin**

Finally, the Commonwealth Government will commit to funding the third and final phase of the successful bore-capping and piping programme in the Great Artesian Basin (GAB). It will seek ongoing commitments from participating state and territory governments and pastoral bore owners.

This proposal will cost around \$85 million over 10 years.

The key elements of the Plan are outlined in more detail below.

An outline of proposed expenditure is at Attachment A.

## **MODERNISING AUSTRALIA'S IRRIGATION INFRASTRUCTURE**

In an average year irrigated agriculture uses 14,000 gigalitres (GL), which is about 70 per cent of all water use in Australia. However, this water is not used as efficiently as it could be:

- between 10 and 30 per cent of the water diverted from rivers into irrigation systems is lost before it reaches the farm gate;
- up to 20 per cent of water delivered to the farm gate may be lost in distribution channels on-farm and around 60 per cent of water used for irrigation on farms is applied using high volume, ineffective gravity irrigation methods;
- more than 10-15 per cent of water applied to crops is lost through over watering, whereas scheduling tools and observational data could more precisely match water application to crop water requirements; and
- inaccurate measurement of water diversions from rivers and water use on farms is leading to unintentional and intentional over use.

Declining water availability and riverine health demand a dramatic improvement in the efficiency, productivity and sustainability of water use.

### **The Proposal**

The Commonwealth Government will invest \$5.9 billion over 10 years to modernise Australian irrigation. While national in scope, the prime focus will be the MDB, where 85 per cent of irrigation takes place. Working with our delivery partners, we aim to achieve efficiency gains of around 25 per cent of total irrigation water use. This programme will generate water savings of over 3,000 GL per year, with over 2,500 GL per year saved in the MDB. Water savings will be shared 50 per cent with irrigators to help meet the challenge of declining water availability, and 50 per cent to address over-allocation and sustain river health.

Our investments will help to increase yields and profitability by stimulating the adoption of technology to better match water application to plant needs. Added benefits of this transformation will be significant savings in labour costs and time through remote or automated control of previously manual tasks. These interventions will sustain the viability of rural communities and the health of rivers and groundwater resources, particularly in the MDB.

The proposed modernisation programme has four inter-related elements.

#### ***Improving delivery system efficiency***

The Commonwealth Government will work with irrigation water providers to lift the delivery efficiency of distribution systems from the current average of 75 per cent to a new benchmark of 90 per cent. Funding of \$70 million will be provided to conduct an assessment to identify the 'hot-spots' where losses occur, and enable targeting of works. This will be followed by a \$3 billion works programme, comprising piping,



channel lining, and system automation, estimated to save up to 1,500 GL per year. Irrigators will need to contribute an additional \$750 million to this programme to share 50 per cent of the total water savings achieved. This programme will require the reconfiguration of irrigation systems and the retirement of unviable parts of irrigation schemes. The Plan provides structural adjustment assistance in support of this objective.

### ***Improving on-farm irrigation efficiency***

Commonwealth Government incentives of \$1.5 billion will stimulate private investment to convert up to 1 million hectares of irrigated farm land to modern irrigation methods. Water savings of about 1,200 GL will be shared with irrigators.

By way of example, conversion from flood irrigation to centre pivot irrigation on a dairy farm can provide savings of around 3 megalitres (ML) per hectare. Laser levelling and associated works to improve rice layouts can provide savings of 1.5 ML per hectare.

The Commonwealth Government will provide \$15 million to develop information tools to help irrigators calculate more precisely how much water to apply and when to meet plant needs. These will include improved seasonal water forecasting models, informed by real-time satellite information on evapotranspiration rates and soil moisture conditions.

### ***More accurate metering and monitoring***

Mandatory national metering standards for in-field accuracy of  $\pm 5$  per cent will be introduced so that water diverted for irrigation more accurately matches entitlements. Around 700 GL can be saved by improving the accuracy of meters and reducing over use. The Commonwealth Government will provide \$125 million to upgrade bulk off-takes, and \$225 million to upgrade farm off-takes to meet national metering standards. Irrigators will be required to contribute half the cost of farm off-takes, and will benefit from remote control, higher flow rates, and the ability to apply water more precisely to crops. The Commonwealth Government will invest \$200 million in telemetry and data systems to allow remote reading of meters and real-time data for better monitoring of flow-based water extractions. The Commonwealth Government will also provide \$50 million to cover half the cost of introducing metering for stock and domestic users in priority catchments.

### ***Improving river and storage operations***

The Commonwealth Government will invest up to \$500 million in practical projects to improve the efficiency and effectiveness of river operations and storages in the MDB. Key areas for consideration will include reducing evaporation losses from Menindee Lakes on the Darling River and bypassing the Barmah Choke on the Murray River. Viable projects will be jointly funded by the Commonwealth Government with state and territory governments. Further investigations will be undertaken to identify the

potential to reduce losses in other locations. It is anticipated that at least 200 GL can be saved.

Some of the water that is lost by inefficient irrigation systems drains away from the surface or seeps into groundwater systems and often returns to rivers downstream. These 'return flows' have been taken into account in the calculation of net savings because they are reduced by more efficient irrigation systems. It is important to note that 'return flows' are often unhelpful to the environment because of their timing or because they result in greater movement of salt into rivers. The additional water secured for the environment in these measures will be able to be managed at a time, in volumes and at locations, where it can deliver the greatest benefit.

### **Stakeholder Obligations**

To participate in the delivery system efficiency upgrade programme, irrigation water providers will be required to develop a system modernisation plan for their scheme and to monitor and evaluate implementation activities to ensure actual water savings are achieved.

Irrigation water providers will also be required to accelerate implementation of the NWI by meeting mandatory metering standards and information provision. They will be required to establish transparent water delivery charging regimes that ensure the long-term operation of infrastructure and remove any remaining barriers to trade. The Commonwealth Government's expectation is that they will adopt the Australian Competition and Consumer Commission recommendations in relation to Exit Fees and waive any such fees on transfers of water entitlements to the Commonwealth Government.

Irrigators will need to have or obtain a meter compatible with national metering standards. To participate in the Commonwealth Government's on-farm water savings programme, irrigators will be required to develop water efficiency plans accredited by agreed delivery partners. Expenditure receipts will be required for payment.

State and territory government agencies will be expected to improve compliance and enforcement of licence conditions and to make all metering and monitoring data freely available to the Bureau.

## **ADDRESSING OVER-ALLOCATION IN THE MURRAY-DARLING BASIN**

There is increasing evidence that the water resources of a number of catchments and aquifers within the MDB are seriously over-allocated and over-used. These are related but different terms. *Over-allocation* is where more entitlements have been issued in a system than can be sustained. *Over-use* is where more water is allocated to irrigators or other users within a given period than can be sustained. This situation has arisen as a result of past decisions by state and territory governments to issue more entitlements than can be delivered by water systems, and by a failure in water sharing plans to set the pool of water available for consumption at sustainable levels.

Exacerbating this problem is the realisation that water availability to irrigators in the MDB is declining because of climate change and the unregulated growth in farm dams, bores and reforestation. These changes have already eroded the security of water entitlements, making it harder for irrigators to manage their enterprises in times of drought.

The NWI sets out the arrangements by which state and territory government water plans for catchments and aquifers should be developed, including making substantial progress in addressing over-allocation and over-use by 2010. On current trajectories, this objective is unlikely to be met without a significant intervention.

If over-allocation and over-use in the MDB are not addressed now, irrigators and other water users will find it very difficult to adjust to the expected future declines in river inflows. Investment will be seriously undermined, and river health, the environment and other public amenity values will be severely impacted, undermining the Basin's productivity.

By acting now, there is an opportunity to properly reset the water sharing plans for individual valleys and aquifers in the MDB on a sustainable footing as intended by the NWI. By acting now, we can put irrigators and MDB communities on a more confident and environmentally sustainable footing to face the challenges ahead.

### **The Proposal**

The Commonwealth Government intends to tackle the over-allocation problem in the MDB head-on.

We will begin by establishing a definitive understanding of the level of over-allocation and over-use in the Basin. This will be achieved through the MDB Sustainable Yields Assessment, recently commissioned by the Prime Minister and MDB State Premiers. CSIRO will provide initial estimates for the first set of catchments in the Basin by end March 2007, and deliver final results by the end of 2007.

Our investments in modernising irrigation system infrastructure will achieve considerable water savings and mitigate against the over-allocation problem. However, more must be done.

We will work with irrigation water providers to identify parts of irrigation schemes that are unviable or not cost-effective to refurbish. These are likely to be located at the extremes of some schemes and on salt-affected soils and aquifers.

We are prepared to invest up to \$3 billion in buying back water entitlements and assisting irrigators in the unviable or inefficient parts of schemes to exit the industry.

The Commonwealth Government will manage the accrued water savings to achieve environmental outcomes, with the possibility of making water available to irrigators when this is not in conflict with environmental needs.

New Commonwealth Government investments in water information will enable us to keep a close watching brief on changes to Basin inflows, providing advance warning of any future adjustments in allocations that might be necessary. Future adjustments beyond 2014 would be based on the risk sharing principles in the NWI.

### **Ensuring Over-allocation Does Not Recur**

To preserve the integrity of the entitlement system, we will ensure:

- future allocations across the MDB are based on realistic assessments of the sustainable level of extraction (informed by future risks such as reduced rainfall from climate change);
- the availability of credible information on the water resource, using the same best-practice hydrological model throughout the MDB;
- an effective metering, monitoring and compliance system is put in place;
- water sharing plans account for the effects of all water users including irrigation, farm dams, bores and reforestation; and
- the operation of the water market will assist with further adjustment.

## **REFORMING MANAGEMENT OF THE MURRAY-DARLING BASIN**

The MDB is of national significance economically, socially and environmentally, with water management central to the prosperity of the Basin. The Basin spans parts of four states and all of the ACT, covering an area of over one million square kilometres (14 per cent of Australia) and is home to over two million people. A further one million people outside the Basin are reliant on its water. The land and water resources of the MDB are of enormous economic significance to the nation, especially in areas such as agriculture and tourism.

The existing mechanism for the management of the Basin is the MDBC. While the current arrangements have made some substantial contributions to Basin-wide water management over the decades, the shortcomings of the current model are of concern to the Commonwealth Government and, indeed, many others.

The decisions taken by the MDBC often reflect parochial interests and do not reflect the best interest of the Basin as a whole. Examples include:

- failure to align water management with the NWI in the areas of water trading, over-allocation and pricing;
- lack of Basin-wide information has led to inefficiencies in management and decision making. For example, a Basin-wide register of water entitlements, and integrated water data systems have not been developed;
- 12 years after introducing a cap of water use, Queensland and the ACT ignore it and NSW is regularly in breach;
- the MDBC has known for several years that the cap on diversions needs to be reduced and include groundwater to be effective, but this has not been achieved;
- activities in one state or territory that cause problems in another can still take place without sanction leading to redistribution of economic and environmental wealth without an overarching management framework;
- consensus-based decision making of the MDBC means that difficult decisions are often avoided or delayed; and
- widely distributed responsibilities for the management of the Basin have led to inefficiency, blame-shifting and under-resourcing by state and territory governments.

### **The Proposal**

It is in the national interest to secure the long-term economic and social returns to the Australian community afforded by sustainable access to the Basin's water resources. This can only be achieved through:

- significant investments in water saving infrastructure;
- new investments in water resource monitoring and water use metering;

- addressing the over-allocation problem via entitlement purchases and structural adjustment; and
- reforming the decision making processes in the Basin.

It is critical that all four strategies are implemented together.

The Commonwealth Government will request the referral of state and territory powers to enable it to manage the MDB in the national interest.

The Commonwealth Government will seek the agreement of NSW, Victoria, Queensland, South Australia and ACT governments to transfer all their powers in relation to the MDBC to enable the Commonwealth Government to oversight water management in the MDB.

To enable system operation efficiencies in the southern Basin and to secure improved environmental outcomes there, the Commonwealth Government will also request that NSW and Victoria transfer powers to manage the Murrumbidgee and Goulburn valleys, along with the Murray Valley already managed by the MDBC. The Commonwealth Government will operate an integrated water allocation system for these interconnected valleys. It will also establish an environmental manager function for the southern Basin to maximise the benefits of environmental water allocations to our iconic river and wetlands.

We propose to reconstitute the MDBC as a Commonwealth Government agency, reporting to a single minister. We will set a new strategic plan for the Basin, incorporating a revised cap on diversions, taking into account for the first time groundwater use and other factors that will reduce river inflows in the Basin in the future. The Plan will be informed by the 2007 Murray-Darling Basin Sustainable Yields Assessment being undertaken by CSIRO on behalf of the Prime Minister and MDB State Premiers. Our significant new investments in water information will ensure that the best available data is presented to water managers from now on.

Water sharing plans for each valley in the Basin will have to be revised to satisfy new planning specifications, which will be enacted through new Commonwealth Government legislation. Each plan will need to conform with the revised Basin cap and make provision for the impacts of future climate change and flow interception activities such as farm dams and plantation development. Commonwealth Government assistance through the over-allocation and infrastructure components of the Plan will help water users in the Basin to adjust to the revised cap.

Commonwealth Government leadership in managing the MDB, supported by our considerable investments in irrigation and river system infrastructure, water information and entitlement purchases will guarantee a brighter future for the Basin.

The responsibility to react decisively to rapidly changing circumstances will be clear and Basin livelihoods will be protected and assisted to adjust to changed circumstances.



## NEW INVESTMENTS IN WATER INFORMATION

You can't manage what you don't measure.

Improved water resource measurement, water usage metering and comprehensive water accounting are cornerstones of the NWI.

Australia's worsening water scarcity problem, exemplified by the crisis in the MDB demands that we deepen and accelerate reform on these cornerstone elements.

Nowhere is the need greater than in the MDB where multiple jurisdictions sharing a common resource, and one that is rapidly diminishing because of over-allocation and declining river inflows. Nowhere is there a greater need to properly account for all uses and losses of water and to forecast future water availability with much improved accuracy.

Regrettably, Australia's water information base is in poor shape and deteriorating because of diminishing state and territory investments and gross inefficiencies in the way that water information is managed across more than 100 different water data collecting agencies nationwide. We must do better.

Nationwide, and particularly in the MDB –

- It has not been possible to conduct timely, rigorous and independent assessments of water resources, seriously impeding the ability to forecast future water availability and make wise water allocation decisions.
- The lack of accurate measurement has made it impossible to estimate how much water is being diverted to irrigation and being used on farms, and how much is being lost or wasted.
- The lack of transparency, independence and rigour in managing water information has eroded community and business confidence in water management across Australia.

### **The Proposal**

By providing leadership and \$480 million in new investment, the Commonwealth Government will transform the coverage, quality and utility of Australia's water information base. It will extend the role of the Bureau, to perform the following functions:

- hold and manage all of Australia's water data;
- report on the status of Australia's water resources, patterns of water use and forecasts of future water availability;
- maintain a comprehensive set of water accounts for the nation;
- set national standards for water use metering and hydrologic measurements;
- influence and support state-based investments in water monitoring and water use metering programmes; and
- commission strategic investigations and procure special data sets to enhance our understanding of Australia's water resources.



The Commonwealth Government will allocate funding of \$400 million over the next 10 years to enable the Bureau to undertake these new functions. Over the next five years, an additional \$80 million will be allocated to enable water data collecting agencies to modernise and extend their water resource monitoring systems. In return, these agencies will be expected to maintain a specified level of monitoring into the future.

The Bureau's new water information responsibilities will be delivered through four key programmes. This national initiative will initially focus on the MDB. The four programmes are:

### ***Modernisation and extension programme***

The Bureau will assist water data collecting agencies to modernise and extend their streamflow, groundwater monitoring and water storage measurement networks, enhancing their accuracy and permitting real-time data transfer to the internet. Complementary funding assistance of \$621 million is provided for greatly enhanced water usage metering under the modernising irrigation element of the Plan.

### ***Information management and reporting programme***

The Bureau will maintain a national database and web-based reporting system for all water information (Australian Water Resources Information System - AWRIS). This will include maintaining a national water account and managing all of the information yielded from Australia's enhanced water use metering programme, announced in a separate part of the Plan. The Bureau will develop national standards for monitoring, metering and water accounting, building upon the work initiated under the NWI.

### ***Analysis and forecasting services***

These services will enable analysis and interpretation of national water information and provide forecasting services. The Bureau will undertake most of the work on annual/bi-annual water resource assessments (including water accounting), mandated by the NWI. It will also be responsible for resolving disagreements on technical definitions such as *sustainable yield* and *river health*.

### ***Investigations programme and strategic data procurement***

The Bureau will commission investigations into strategic water information needs such as the Murray-Darling Basin Sustainable Yields Assessment, recently commissioned by the Prime Minister and MDB State Premiers. In addition, each year the Bureau will procure various spatial data sets, such as satellite data coverages, in support of its assessment and forecasting activities.

The outputs from the Bureau will provide an improved basis for making informed policy decisions and judicious infrastructure investments. Critically, they will also

enable us to evaluate progress being made in water reform. This will engender greater community and business confidence in water management.

Users of water information need a vastly better product in terms of quality, depth and timeliness. Water resource information is best delivered to stakeholders by a single and highly-equipped provider. The Bureau will provide a higher level of data integration, analysis and forecasting services than is currently available via existing state and territory systems which are fragmented and under-resourced.

The activities of the Bureau will be independent and transparent, removing any perception of vested interest or bias in reporting and enabling an immediate step change in the accessibility of water information.

### **Stakeholder Obligations**

The Commonwealth Government will require all water data collecting agencies (public and private) to:

- maintain a specified standard and level of monitoring and metering, to be negotiated with the Bureau;
- share all of their existing water data assets with the Bureau and transfer all new data to the Bureau as it is collected;
- commit to the principle of a single national water information system (incorporating a national water account), to be managed by the Bureau;
- contribute some of the cost of modernising and extending their measurement networks, to be negotiated with the Bureau; and
- meet the full cost of maintaining their measurement systems, including periodic calibration costs, and system modernisation costs beyond 2012.

## **NORTHERN AUSTRALIA**

While we go about repairing damage and adapting to new conditions in the south, we must also look to the north. We have important water resource and environmental assets there which must be sustained. However, there is also opportunity for the further development of northern land and water resources and we must understand how to do that wisely.

Future and ongoing development of northern Australia's land and water resources must take place in a strategic framework that is ecologically, culturally and economically sustainable, which will ensure that schemes are consistent with the principles of the NWI. This is critical if the widespread problems that have arisen from land and water resources development in southern Australia are to be avoided. There is a knowledge gap in the north that must be filled.

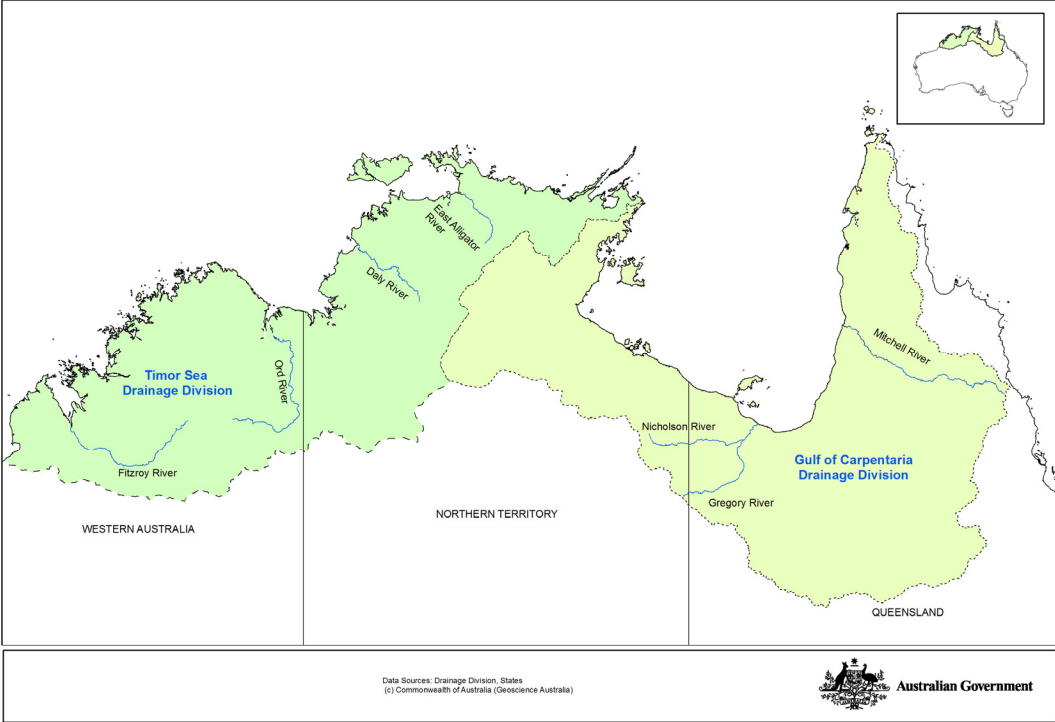
### **The Proposal**

The Commonwealth Government will establish a Taskforce chaired by Senator the Hon Bill Heffernan to examine the potential for further land and water development in northern Australia. This will be informed by a Northern Australia Land and Water Futures Assessment.

For each of the key basins in northern Australia, the assessment will identify the key ecosystems, community and indigenous assets and their watering needs to ensure they are sustained into the future. Recommendations, consistent with the principles of the NWI, will be made concerning the ability of each basin to support increased consumptive use.

The assessment will draw on analyses to be provided by resource management agencies, consultants and research bodies and will incorporate findings from investigations programmes already in progress. Submissions will be sought from industry and community groups. Commencing in 2007, reports will be regularly provided to governments and key stakeholders, with a final report no later than June 2012. Funding will be \$20 million over five years from the Australian Government Water Fund.

# Northern Australia



## **GREAT ARTESIAN BASIN**

The Great Artesian Basin (GAB) is one of Australia's most significant water resources. Uncontrolled flow from bores and open earthen bore drains in the GAB threatens continued access to artesian water by pastoralists and the health of important groundwater-dependant ecosystems. In recent years, the repair of uncontrolled bores and replacement of bore drains ('capping and piping') has allowed improved farm and environmental management, and provided for new higher value uses of the groundwater resource. However, the job is not finished.

### **The Proposal**

The Great Artesian Basin Sustainability Initiative has been supported by Commonwealth Government investment since 1999, with further investment, phase 2, committed to 2009. It is already clear that phase 2 will not cap and pipe as many bores as planned due to increased costs and the impact of drought on the ability of landholders to contribute to the costs. It is estimated that 60 per cent of all the bores will have been capped and 75 per cent of the drains replaced by the end of phase 2.

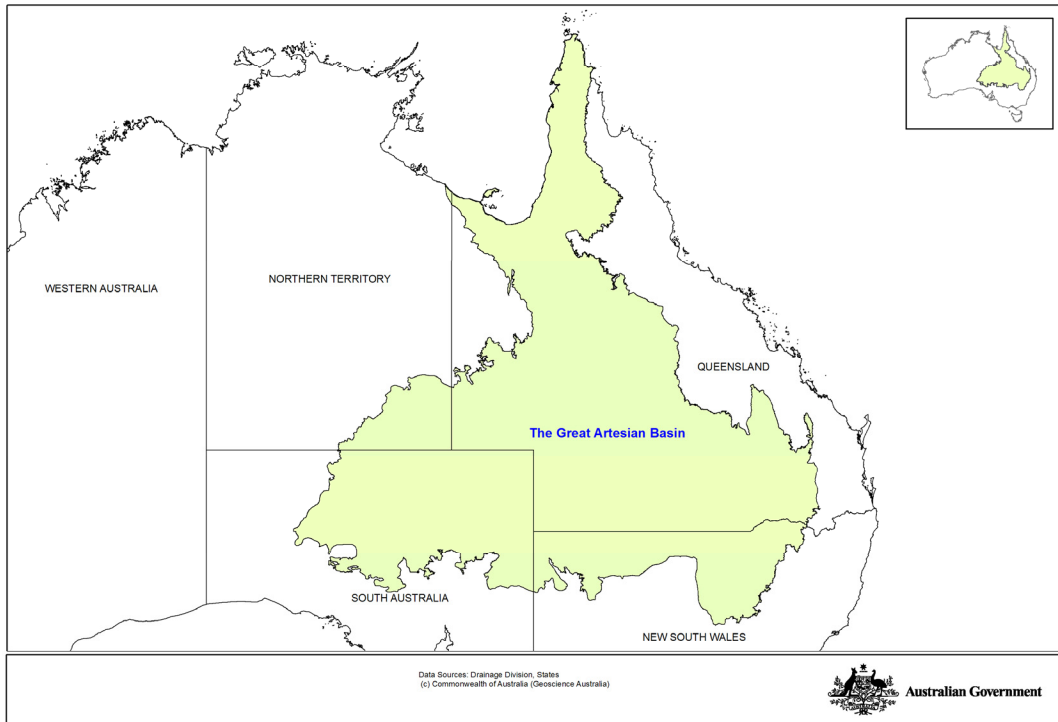
The Commonwealth Government will fund a third phase of the Great Artesian Basin Sustainability Initiative that takes the management of the GAB's water resources forward, consistent with the principles of the NWI. While works under the Great Artesian Basin Sustainability Initiative have already saved water and improved groundwater pressure, phase 3 will establish an agreed minimum pressure surface target for the GAB, together with a deadline for all bores to be capped and piped. Priority will be given to capping and piping the remaining higher-flowing bores and those that affect public values (such as mound springs), and with legal remedy for bores that are not capped.

Funding from the Commonwealth Government for Great Artesian Basin Sustainability Initiative phase 3 will be set at \$85 million. This additional contribution (over phase 2) recognises the increased cost of materials and the greater scope of activities to be undertaken. This intervention will make a major contribution to the sustainability of the GAB.

### **Stakeholder Obligations**

As part of the Great Artesian Basin Sustainability Initiative Phase 3, the Commonwealth Government will require the establishment of proper entitlements, pricing regimes, water use metering and reporting for all GAB bores. We will also seek improved land and water management practices on the part of individual landholders. As in previous phases of the Great Artesian Basin Sustainability Initiative delivery arrangements will be set through Commonwealth Government Guidelines and Intergovernmental Agreements (including agreement to an agreed minimum pressure surface target for the GAB), with matching investment required from state and territory governments and pastoral bore owners.

# Great Artesian Basin



## ATTACHMENT A

### A NATIONAL PLAN FOR WATER SECURITY

All figures in \$million  
Costings over ten years

	TOTAL ADDITIONAL COST (\$m)
<b>MODERNISING IRRIGATION IN AUSTRALIA</b>	<b>5,885</b>
Delivery System Efficiency gains	3,130
On farm efficiency gains	1,635
Metering, monitoring and accounting	620
Improving river operations and storage	500
<b>ADDRESSING OVER ALLOCATION IN THE MDB</b>	<b>3,000</b>
Purchasing entitlements/structural adjustment	3,000
<b>REFORMING THE MDBC</b>	<b>600</b>
Set and administer a new cap	100
MDBC operations	500
<b>WATER INFORMATION</b>	<b>480</b>
Modernising and extension program	80
Information management and reporting program	120
Analysis and forecasting services	120
Investigations program and strategic data procurement	160
<b>NORTHERN AUSTRALIA &amp; THE GREAT ARTESIAN BASIN</b>	<b>85</b>
<b>TOTAL</b>	<b>10,050</b>