



Recommendations that will ensure the success of the National Plan for Water Security in the Murray Darling Basin

The Top Six Critical Issues are:

1. **Tackling Over-allocation and Over-use.** This requires clear timelines & targets for water recovery for the environment, including the return of at least 1,500 GL to the Murray River by 2014.
2. **Use all Available Mechanisms for Environmental Water Recovery.** The water recovery should begin immediately, particularly buying water entitlements from willing sellers, as this is the most cost-efficient and effective way of returning water to the environment.
3. **Provide Reliable, Secure and Well Managed Environmental Water.** The environmental manager requires a legislative basis and clear, un-conflicting objectives to achieve the best outcomes for river health. This will ensure that early gains in water recovery are not eroded over time. Water products must also be carefully chosen to achieve the right balance between high reliability water (available in all years) and low reliability water (only available in wetter years), a balance that will also buffer the security of environmental water in the face of climate change.
4. **Ensure Sound Governance.** This requires that State and Commonwealth activities are coordinated, transparent, accountable and clearly defined and that decision making by an independent, skills-based national authority is based on sound science. This will also enable the effective coordination of land, water and catchment management.
5. **Manage Floodplains and the Darling River.** Effectively dealing with all aspects of floodplain development through an effective power of veto and overseeing state management, and developing a specific plan to protect the unique characteristics of the Darling River system through targeted investment in increased environmental flows and complementary land and water management.
6. **Protect Wetlands.** Wetlands represent a unique challenge and cross over between water and land management. National wetland legislation must be developed to ensure international obligations and ecological values of significant wetlands of the basin are protected and enhanced

Further detail on the top twenty issues and associated recommendations are attached.

Twenty recommendations which will ensure the success of the National Plan for Water Security in the Murray Darling Basin

1. Tackling over-allocation and over-use needs clear targets and timelines for water recovery

The National Plan for Water Security (the Plan) states the *“Commonwealth Government intends to tackle the over-allocation problem in the MDB head on”* and provides two major programmes for water recovery, one based on infrastructure and efficiency and the other on buying entitlements and structural adjustment.

The plan is light on detail however and fails to set any timelines or targets for dealing with over-allocation and over-use beyond the 10 year timeframe of the plan itself, which over runs the current timelines set in the National Water Initiative by more than 2 years.

Recommendation:

- Annual targets and timelines for water recovery that meet the short, medium and long-term targets for environmental flow requirements as described below must be established and agreed as a matter of urgency.

2. What the River Murray Needs

Governments have previously agreed to recover an average 500GL annually by mid-2009 for the Murray as part of the Living Murray Initiative ‘First Step’. In 2005, it was widely recognised that this plan was faltering and would fail to deliver the agreed 500GL by mid 2009.¹ While 500GL along with important on-ground works and measures does represent an important first step in restoring the River Murray to health, much more is required. The Scientific Reference Panel for the Murray-Darling Basin Commission, Living Murray Initiative, in 2003 reported:

*“...combined with improved structural, operational and water quality management...there is a possibility that a further 1,500 GL of environmental flow allocation, could deliver a healthy working River Murray system”*²

Studies conducted since then³ suggest that much more water recovery is needed to balance losses from climate change, increased use of groundwater, farm dams, plantation forestry, bushfires, and reduced return flows from efficiency.

Recommendation:

- Targets and timelines for the River Murray should:
 - Meet the existing commitment of an annual average 500GL of water recovered for the River Murray by mid-2009;
 - Return best available scientific recommendations of at least a further 1,000GL to the River Murray by at least mid-2014, in keeping with the commitment under the National Water Initiative to substantially address overallocation and overuse by that date; and

¹ See MURRAY-DARLING BASIN MINISTERIAL COUNCIL COMMUNIQUE – September 30 2005

² Cooperative Centre for Freshwater Ecology, Ecological Assessment of Environmental Flow Reference Points for the River Murray System *Interim Report prepared by the Scientific Reference Panel for the Murray-Darling Basin Commission, Living Murray Initiative*. October 2003

³ *Risks to the Shared Water Resources of the Murray Darling Basin*, CSIRO/MDBC 2006

- Develop long-term targets for water recovery beyond mid-2014 informed by the current 'sustainable yield' study being conducted by CSIRO and reductions to flows caused by the 'six risks to shared water resources' describe above.

3. Mechanisms for Water Recovery & Environmental Portfolio

There are a wide range of mechanisms available or in development that may be used for water recovery to meet the appropriate targets and timelines, and the expert view is that market mechanisms are the most effective and efficient way to return water to the environment. Since direct purchase of permanent water entitlements on the open market alone may not provide the volumes of water required to address over-allocation and over-use on its own, and infrastructure investments are expensive and time consuming to implement, a combination of new and existing market based mechanisms and infrastructure investments are needed to recover water for the environment.

Using a range of market mechanisms will also enable the development of a varied 'portfolio' of environmental water entitlements. Such a portfolio is necessary to enable the range of different hydrological and other ecological requirements of the Basin's rivers and wetlands to be met.

The NSW Riverbank Initiative has been highly successful to date in recovering water within a short timeframe and at the same time building and consolidating good relationships between officials and landholders. This process should inform the process of water recovery for other stressed river systems.

A 'portfolio' of water entitlements needs to be developed for all rivers and wetlands with 'characteristics' that meet the needs of the environment including clear rights to share river, channel and dam capacities. This approach was supported by the Productivity Commission report in 2006: *"An agency should be established as soon as is practical for the purpose of acquiring water for the Living Murray Initiative. This agency should acquire a range of water and water-related products, rather than acquiring water through infrastructure investments and purchase of water entitlements alone"*⁴

Recommendation:

- A clear, binding commitment to use the full range of mechanisms available through the National Water Initiative (NWI) in the most cost-efficient and effective manner possible to recover water including:
 - Purchase of permanent water from willing sellers
 - Savings from infrastructure and water efficiency measures
 - Purchase of temporary entitlements
 - Options, leases and contract schemes
 - Licence attenuation
- If necessary to achieve the objectives of the plan, structural adjustment and compulsory acquisition should not be ruled out.

4. Where does the Snowy River fit in?

The NSW, Victoria and Commonwealth governments are committed to returning 28% average natural flows to the Snowy River but water recovery is well behind schedule, currently at 4% and

⁴ Productivity Commission 2006, *Rural Water Use and the Environment: The Role of Market Mechanisms*, Research Report, Melbourne, August.

without stepping up the water acquisition, the 2009 interim target of 15% annual natural flow will be missed. Flows for the Snowy are entirely dependent upon water recovery in the Murray, Murrumbidgee and Goulburn Rivers.

Recommendation

- Governments should clarify what the national plan for water security means for the Snowy, what the legal implications are of the various inter-Government commitments to environmental flows and the various inter-Government Deeds and Agreements associated with the Snowy Corporatisation Act as well as guarantee that the full 28% of Snowy environmental flows will be included in any proposed reforms to the management of the Murray Darling Basin.
- Governments should fast track projects to secure Snowy environmental flows, recognising that the capacity of Water for Rivers to meet Snowy targets will be jeopardised if the proposed Federal plan is implemented before the targets are met and permanently decommission the Mowamba Aqueduct, as was the understanding of the Australia public.

5. Scheduling of Water Recovery Programmes

The plan sets a national efficiency target of 25% *'of total irrigation water use'* with water savings of over 3,000GL per year nationally and over 2,500 GL per year saved in the MDB which will be shared 50:50 between irrigators and the environment. This should deliver at least 1,250 GL for the environment but is likely to take many years (at least 10 years +) to deliver all the savings, when the rivers urgently need water in the short term.

The plan proposes that there will be a 50/50 sharing of water savings between the environment and irrigators although the government will provide 80% of investment. This is a very good deal for irrigators and it is important that this is matched by an equally good deal for the environment. e.g. environment/public good contribution equals government expenditure (80% environment, 20% industry).

Recommendation:

- The Commonwealth should start to roll out the \$3 billion plan for buying water and structural adjustment straight away so that water can be returned to rivers as soon as possible. There is no reason to delay purchasing water until projects under the infrastructure part of the plan start to deliver water for the environment.
- There should be a clear target and time-lines put place for direct water recovery for the environment (see point 2).

6. Reliability of Environmental Water

The impact of climate change is likely to further reduce the availability of low reliability water entitlements. For example, it appears clear that the Goulburn Murray Water Recovery Package (GMWRP) will not deliver an average of 120GL/year to The Living Murray because of reduced inflows caused by climate change and other key factors⁵. The GMWRP was "expected to provide an average volume of environmental water of 120GL a year when it is kept in rivers"⁶. The water recovered by GMWRP represents more than 50% of Victoria's TLM commitment of 214GL.

⁵ *Risks to the Shared Water Resources of the Murray Darling Basin*, CSIRO/MDBC, 2006.

⁶ *Securing Our Water Future, Together*, 2004, p.73.

The analysis below shows that for the seven years between 1999 and 2006 the GMWRP would not have delivered 120GL to TLM in any year.

Season	Murray - Maximum Sales Allocation	Loddon - Maximum Sales Allocation	Goulburn - Maximum Sales Allocation	Campaspe - Maximum Sales Allocation	GL that would have been provided to the environment under the GMWRP
1999/00	90%	0%	0%	0%	50
2000/01	100%	0%	0%	120%	60
2001/02	100%	0%	0%	80%	60
2002/03	29%	0%	0%	0%	16
2003/04	0%	0%	0%	0%	0
2004/05	0%	0%	0%	0%	0
2005/06	41%	0%	0%	0%	23
Maximum annual volumes of medium reliability entitlement available for use by TLM: Murray 55.7GL, Goulburn 124GL, Loddon 1.7GL, Campaspe 4.9GL					

Recommendation:

- The portfolio of water products should have a level of security that ensures environmental water can be delivered to meet current and future demands of the system, and not rely on low security water products that may never eventuate in a warmer and dryer Murray Darling Basin in the future.

7. Managing Climate Risk

Climate change poses a significant risk to future water availability, and it could potentially reduce stream flow by 1,100 GL in 20 years (5% of annual flow) and by 3,300 GL in 50 years (15% of annual flow).⁷

The management of climate risk however is unclear, for instance Victoria has a different risk framework to the National Water Initiative, and it remains unclear how shares to river flow would be adjusted to account for climate change in a manner that does not seriously undermine public investment in environmental flows.

The Plan proposes that potential future changes to water flows from climate change or other risks would ‘...beyond 2014 ...be based on the risk sharing principles in the NWI’. Sections 46-51 of the NWI deal with this issue which recognises the potential impacts of climate change and periodic natural events such as bushfires and drought, however the risk sharing framework will *only* work if over-allocation and overuse have already been dealt with.

Recommendation:

- Properly address over-allocation and overuse according to the targets and timelines set out above. Also, the risk sharing arrangements for water sharing in the context of climate change should be reviewed to ensure that the impact of reduced rainfall and inflows is proportionately borne by the environment and other water entitlement holders.

⁷ Van Dijk, A. et.al 2006 *Risks to the Shared Water Resources of the Murray-Darling Basin*, Murray-Darling Basin Commission, Canberra

8. Environmental Water Security & Management

The plan mentions a number of times that water savings allocated to the environment may be made available to irrigators when it is not in conflict with environmental needs. However recent experience illustrates that governments have little accountability regarding the delivery of environmental flows, particularly when political pressure is brought to bear late in the election cycle. Institutional arrangements currently provide inadequate protection for the public investment made in environmental flows. Environmental non-government organisations or other interested community groups should have legal standing to raise issues regarding management of environmental water reserves, including the ability to formally question decisions to trade environmental water.

Recommendation:

- The environmental manager role needs to have a legislated base which is independent of government, with clear, unambiguous and non-conflicting objectives and responsibilities to use and manage environmental water to achieve optimal outcomes for the environment, including the capacity to buy and sell environmental water and ensure security of entitlements. Clearly this requires a multiplicity of skills including environmental, river management and accounting skills, that adequate resources are made available.
- The environmental manager must ensure that environmental water will be given at least the same security as water for other consumptive uses (as required under paragraph 35 of the National Water Initiative).
- Environmental non-government organisations or other interested community groups should have legal standing to raise issues regarding management of environmental water reserves, including the ability to formally question decisions to trade environmental water.

9. Ensuring Integrated Catchment Management

The Commonwealth proposes to establish a strategic plan for the basin which would include river valley by river valley water allocation plans. While this approach is supported, they should integrated with valley by valley targets and objectives for river health and other catchment NRM objectives, which are likely to remain under state government control. This could result in split accountability.

Recommendation:

- The plan must spell out how clearly how the water plans will be linked to river health plans and ensure catchment management is fully integrated to secure and maintain healthy rivers and wetlands. Similarly clearly defined governance arrangements and responsibilities are critical to effectively integrate catchment management. See point 19 below for more details.

10. Process for Setting Targets for River Health

The plan commits to '*establishing a definitive understanding*' of over-allocation and over-use through the MDB Sustainable Yields Assessment being undertaken by the CSIRO which will deliver estimates for the first set of catchments by the end of March 2007 and final results by the end of 2007, after the Federal election.

While groups welcome a scientific, independent analysis of the extent to which existing environmental and productive objectives will be reached under present and likely future scenarios, we fail to see how this information can be immediately translated into targets for sustainable yields, and there is still little detail on the methodology to be used by CSIRO.

Recommendation:

- A parallel process should examine existing environmental objectives on a catchment by catchment basis and assess their sufficiency for securing the long-term health of environmental assets and ecological functioning and determine the flow regime required to maintain this, including the magnitude, frequency, seasonality and variability of flows. The total information provided by these analyses should then inform the long-term targets for water recovery.

11. Approaches to the Darling system

As with the southern basin the Darling system and its wetlands, such as the internationally significant Macquarie Marshes, are seriously threatened due to the severe over-allocation of water. Illegal diversions and floodplain harvesting are also causing significant disruptions to ecological processes.

Recommendation

- The Darling needs a clear plan to return it to health that recognises it as a less regulated system with extensive floodplains and wetlands that play a critical role in river health and the regional economy.
- The plan needs to focus on targeted investment in increased environmental flows and complementary land and water management. This would include the need to establish the water requirement for river health and sustainable water yields across the Darling Basin as well as a range of legislative and policy mechanisms to protect and restore the Basin

12. The Plan must deal effectively with all aspects of floodplain development

Issues with floodplain development are twofold – the diversion of water adds to the issue of overextraction, and badly placed development alienates floodplains and wetlands from the river channel, which is ecologically disastrous for both aspects of the environment.

Both these aspects need to be dealt with to ensure that overextraction is fully dealt with, that the integrity of environmental water is not undermined through diversion and theft, and to ensure that the environmental water can reach all the targeted assets (such as the wetlands or floodplain).

Recommendation:

- The Commonwealth Minister needs to have an effective veto power over floodplain development and harvesting, harvesting in breach of the cap and harvesting that captures environmental water (inadvertently or otherwise). The Minister must also accredit and audit plans for the licensing and regulation of all floodplain development.
- The Commonwealth must also ensure that NSW & QLD in particular do a full state wide audit and environmental assessment of floodplain development and harvesting prior to the licensing of works and activities in line with requirements under their new water legislation.

13. Establishing an Effective Cap

There is strong anecdotal evidence that suggests there are significant floodplain harvesting activities that are in breach of the cap agreement. The introduction of the MDB Cap and specific annual limits on river extractions has meant that floodplain harvesting and groundwater extraction have become even more attractive sources for further water supply, and anecdotal evidence suggests that there has been a significant growth in harvesting since the Cap was developed in the mid 1990s.

Floodplain harvesting is a significant aspect of water use within the MDB, as even small or moderate flows and floods (which occurred in most rivers in most years) can be harvested. Similarly, rainfall harvesting & farm dams can capture significant quantities of water, particularly where small tributary or effluent creeks are turned into off-river storages.

Failure to integrate groundwater management with surface water management has resulted in significant double accounting and inadvertently resulted in water extraction exceeding the recognised cap figure.

Recommendation:

- All forms of groundwater extraction, interception and water diversion, including floodplain harvesting and farm dams, need to be incorporated within the cap if overextraction is to be properly dealt with. The Federal plan must ensure that floodplain harvesting activities are brought under the 93/94 cap and have the power to ensure works in breach of cap can be modified or removed.

14. Moratorium on New Water Licences and diversions

Under the water planning process in Queensland an additional 8 billion litres of water was identified for auction as new water licences on the Warrego (a tributary to the Darling). The auction, which was intended to go ahead in early 2007, has been temporarily suspended by the Queensland Premier while the negotiations over water management continue.

Recommendation:

- There should be a moratorium on the allocation of any new water licences and diversions within the Basin until the plans and caps have been established. The Commonwealth is about to embark upon a significant operation to fix up the water problem – the allocation of new licences only exacerbates the current problem and undermines this work.

15. National Plan must address International Obligations under the Ramsar Convention

There are currently 15 wetlands of international significance in the Murray Darling Basin, covering almost 500,000 hectares.

To date the Australian Government, as the Contracting Party to the Convention, has failed to meet some of its key Ramsar obligations, in particular the maintenance of the ecological character of listed Ramsar sites and the promotion of the wise use of all wetlands. In part this problem has been due to the separation of powers between the State and Federal Governments, as water management and land use planning has occurred at state and local levels. Nor has the EPBC Act been able to alleviate over-allocation, the key cause of decline, partly because much of the

development occurred long before the enactment of the Act and the Act does not have the capacity to adequately deal with the cumulative impact of over-extraction.

Recommendation:

- The plan must include strategies for all nationally and internationally significant wetlands that include timelines and targets for the urgent delivery of environmental water and management of other relevant issues, such as floodplain development and land use planning.
- New wetland legislation must incorporate all aspects of the Ramsar Convention, including requirements to ensure the maintenance of the ecological character of listed sites, a clear prioritisation in the delivery of environmental water, and the requirement to address threats facing listed nationally and internationally wetlands and high conservation value freshwater areas.

16. Ensure that responsibilities for wetland management are clearly established

To date the management of many wetlands in the Murray Darling Basin has failed to maintain their ecological values, with many areas already lost or seriously degraded. This failure is due in part to a management discord between land use planning, development control and water management.

The problem is also exacerbated by the variable location of wetlands and the fact that wetlands represent a complex interface between land and water management.

Recommendation:

- The Federal Plan for water must overcome this discord and ensure that there is a clear delineation of responsibilities around the delivery and protection of environmental water and wetlands and arrangements for integrated resource management. This is particularly important given that the current proposals, which involve Commonwealth delivery and management of environmental water but State-based compliance and licensing, could perpetuate past issues.
- There is a clear need for Commonwealth legislation, with corresponding State legislation, that ensures complementary land and water management for all nationally significant wetlands and high conservation value freshwater areas, and all Ramsar wetlands. Such legislation should:
 - clearly define responsibilities for all aspects of management and outcome delivery (including the delivery of environmental water, and maintenance or rehabilitation of the wetlands and their values);
 - include a trigger that strictly controls the impact of new development or actions on nationally important wetlands as well as Ramsar wetlands; and
 - include provisions that enable the legislation to deal effectively with cumulative impacts and actions that occur in the catchments upstream.

17. Opportunity to Address NWI Obligations on High Conservation Value Freshwater Areas

The Plan confirms that it will meet existing NWI commitments, which include obligations to “identify and acknowledge surface and groundwater systems of high conservation values, and manage these systems to protect and enhance those values” (paragraph 25(x)).

Recommendation:

- The Plan must include details on the identification of all HCV freshwater areas within the MDB (including national freshwater areas and coordinating the identification of state significant HCV freshwater areas).
- The Conservation Groups envisage that the HCV areas would take many forms and be designated according to a range of values including environmental, scientific, cultural (indigenous and non-indigenous), heritage, and social values.
- Wetland and high conservation value area legislation needs to include provisions that establish clear responsibilities for managing and protecting these areas between jurisdictions.

18. Clarification of Management of Regulated and Unregulated Rivers

The proposed plan states that the Commonwealth will take over key irrigation infrastructure including dams, weirs, barrages and locks, and the new Authority will operate all river systems and aquifers in the Basin. Particularly within the northern basin context, this will necessarily require the operation and management of both regulated and unregulated systems. Whilst the management of unregulated systems will not involve the operation of infrastructure the need to manage all water extraction (including floodplain harvesting) within the system necessitates their inclusion.

Recommendation:

- The Plan needs to clarify that all forms of water extraction and capture are included within the plan and the operations of the new Authority, including both the regulated river channels, unregulated systems and tributaries (including those throughout the Darling), as well as water diversion through methods such as floodplain harvesting and other interception activities.

19. Governance Arrangements and Split Accountability:

The Commonwealth has proposed to establish a new Murray-Darling Basin Authority to replace the Murray Darling Basin Commission “...rather like the function now performed by River Murray Water but extending to all river systems and aquifers in the basin”.

It is widely recognised that the MDBC is in need of reform - the current administrative arrangements of the MDBC are overly complicated and the Commission has been a battle ground for competing state and stakeholder interests for over a century. The Commission is also largely driven by political forces, rather than led by experts, and this disjuncture needs to be avoided in any new governance arrangements.

The proposed Commonwealth take over, while likely to streamline management of the river channel and water delivery, poses a significant risk of diminishing public accountability by splitting responsibility for river and catchment health between the states and Commonwealth governments. The plan does not currently indicate how it will resolve integrated natural resource management issues nor manage the threats to MDB water resources identified by the CSIRO given that the management of significant catchment-based activities will remain with the states.

The management of wetlands and floodplains require integrated catchment management. Similarly the majority of the risks to future water availability in the MDB are related to catchment

activities. Hence the relationship between State and Commonwealth governments remains critical if the cumulative impacts of reforestation, farm dams, groundwater extraction, bushfires, reduced return flows and climate change are to be effectively managed.

Recommendation:

- It is critical that governance changes clearly demonstrate how they will deliver good outcomes for the environment and communities, be supported by sound science, be independent and nationally focused. There is merit in having a body similar to the Reserve Bank of Australia or Australia Competition Council overseeing the governance to try and take the politics out of river management.
- Roles and responsibilities need to be clearly defined if the new governance system is to be accountable, and Commonwealth river and water management need to be coordinated with state activities to ensure land and water management are complementary.

20 No Environmental Monitoring Budget

The plan does not currently identify any budget for environmental monitoring, which is an essential component if we are to have confidence in identified targets and the levels of sustainable extraction that will be determined. It is also necessary to enable adaptive management, particularly in the delivery of environmental water.

Recommendation:

- Monitoring programs should be included as a vital component of the water recovery and trading programs. This will allow governments to adapt river management and the release of flows to maximize the benefits to the environment. There is no specific allocation in the package for monitoring.