The Victorian Government Submission to the *proposed Basin Plan*

WHOLE OF VICTORIAN GOVERNMENT SUBMISSION

APRIL 2012

The Victorian Government's Response to the *proposed Basin Plan*

Whole of Victorian Government Submission, April 2012

Executive Summary

The Victorian Government is urging the Murray-Darling Basin Authority (MDBA) to revise its *proposed Basin Plan* so that the Plan better balances the needs of regional communities with those of the environment. By including local input from communities and the benefits of environmental works and measures, this will also have the two-fold effect of ensuring that the Basin's resources are efficiently and sustainably managed in the national interest.

The efficient and smart use of environmental water is the key point of the Victorian Government's submission; without innovative solutions to environmental watering, the outcomes of the Basin Plan will not be met. It is the opinion of the Victorian Government that environmental outcomes can also be met using less water if environmental works and other measures are employed for Ramsar listed icon sites and other areas of environmental significance.

The Victorian Government has submitted to the Commonwealth proposals for more than $380 million for water projects in northern Victoria under the Basin Plan, including $194 million for priority works, which would begin this process of increasing the efficiency of environmental water.

There have been substantial improvements in the use of irrigation water since the 1990s and these developments and techniques can be used as a base to increase the efficiency of environmental water. Australia has been a world leader in the development of water use efficiency and the development of irrigation techniques; this needs to extend to the areas of environmental watering.

While the Victorian Government has a number of options for progressing the Basin Plan, the Victorian Government has made it clear, to both the MDBA and the Commonwealth, that it cannot support the proposed Plan in its current form, due to a number of aspects of the Plan, particularly in relation to:

a) The proposed transfer of 2,750 gigalitres (GL) of held water each year to the environment poses too great an impact on regional communities and industries.

b) The MDBA's failure to explore options available for achieving environmental outcomes with less water in the required detail, including through the use of environmental works and measures, changes to system operations and more efficient use of environmental water; it is essential for the MDBA to include scope for this in the final Basin Plan.

c) The uncertainties associated with the implementation of SDLs poses unacceptable risks to regional communities, principally the un-apportioned end-of-system requirements.

d) The proposed Environmental Watering Plan is not truly adaptive, contains critical gaps, and does not govern the use of Commonwealth held environmental water.

e) Proposals for water quality and salinity are highly problematic, threaten to undermine existing State frameworks and could be mandatory in their application due to their inclusion in the legislative instrument.

f) Roles, responsibilities and legal obligations are unclear, including the consequences of non-compliance, and identifying who pays for the large cost legacy the Plan will create.

Victorian communities have returned, or agreed to return, more than 650 GL for the southern Murray-Darling Basin since 2009. More than 1000 GL has been returned, or agreed to be returned, from northern Victoria for the environment since 2000, which has had profound changes on the irrigation footprint of northern Victoria.

In light of this, the potential severity of impacts posed by the proposed Plan are unacceptable, especially given the lack of justification for the MDBA's proposals and the high level of uncertainty within the Plan. Under the additional water use reductions that are proposed for the State of Victoria, substantial declines in gross regional product for the key industries of dairy, grape production and mixed grazing are expected. This would subsequently lead to reduced levels of income, reduced local government revenue, social dislocation and isolation, which would be exacerbated by associated shifts in service availability, from local communities.

Victorian communities have already done their fair share of the heavy lifting for water for the environment, and in line with the impacts identified above, any further water taken from productive use must be fully considered and justified, with the priority that it come from infrastructure and on-farm programs, ahead of strategic purchase.

Victoria has consistently maintained that a practical Basin Plan would achieve environmental improvements with smarter use of less water, which in turn eases the impact on communities and jobs. It would focus on environmental engineering works and other measures to get better use out of water for the environment - rather than drastic cuts in water entitlements.

Environmental outcomes can be achieved with less water through environmental works

The Authority has not clearly justified the environmental outcomes it wants to achieve given the large volumes of water it wants to recover from productive use, nor does the Plan explore how to get improved outcomes for the environment using less water.

This is despite continual calls from the Victorian Government for the Commonwealth to prioritise environmental works and measures to promote the efficient use of environmental water. All water users, productive and environmental, need to have water use efficiency as a foremost priority; this becomes particularly apparent during drought periods.

The Victorian Government's proposals for more than $380 million for water projects in northern Victoria under the Basin Plan, including the $194 million priority works, would help to achieve the same, or similar environmental outcomes to those being sought under the Plan, using far less water than that required to raise river levels and create overbank flows, as currently proposed by the MDBA.

The works would lead to a reduction in held water, that would leave more water for agriculture, which underwrites the long-term future of communities in northern Victoria, the security of food production, and an ongoing, strong contribution to the national export economy.

Similarly, positive outcomes can be achieved with smarter decision-making around releases, particularly in coordination with river system operators, to significantly improve the efficiency of environmental water use, requiring less water to be drawn from the consumptive pool.

The proposed Plan raises expectations of high volumes of water being delivered to environmental sites, which cannot be met due to constraints in the river system. As it stands the proposed Plan does not deal with the practical problems of delivering large volumes of water to environmental sites, such as the hazards and legal implications of flooding private land.

Uncertainties within the Plan pose unacceptable risks for communities

As the *proposed Basin Plan* is set out, it creates significant uncertainties that pose unacceptable risks to regional communities and State Governments.

The MDBA is proposing legally binding sustainable diversion limits, which would remove large volumes of water from productive use in the Basin each year, without specifying the total volume of water to be taken from productive use within Victoria, or where in the State's north it will come from.

Also concerning to the Victorian Government are the proposed limits for groundwater, aimed at reducing access to main aquifers; these limits are not supported by technical work and also are not reasonably balanced.

Under the proposed Plan, for the southern Basin the MDBA is proposing that 971 GL be made available to meet downstream needs. This is not attributed to States or regions in any way, meaning the full amount could, in principle, be taken from Victoria depending on how the Commonwealth Government chooses to 'Bridge the Gap'.

Also concerning is the liability that is assumed by the States under the proposed Plan, which suggests that if the Commonwealth does not recover enough water to meet its targets, the States could be left to comply with SDLs on their own, leading to further uncertainty and upheaval for irrigation communities.

In line with this, the Victorian Government does not support the MDBA's proposal to review SDLs in 2015, as it only serves to further increase uncertainty for Basin communities. Despite suggestions that a review could relax the amounts of water to be returned to the environment, it is uncertain what a review could achieve due to the need for changes to the Basin Plan to pass through Federal Parliament; this would only serve to increase the length of policy uncertainty for businesses and communities.

Further, by focusing on the notion of a 2015 Review, issues in the *proposed Basin Plan* have the potential to be overlooked under the assumption of a 'fix-it' option in the future. It is essential that the legal instrument that goes to Federal Parliament has worked through the concerns raised by States and communities during the consultation period.

Beyond the key issues raised above, the Victorian Government believes that there are a number of critical process issues associated with the MDBA's proposed regime for assessing compliance with SDLs, which are likely to create a large cost legacy that will be borne by State Governments.

Victoria's State and local governments, agencies, communities and businesses want certainty and settlement by the time the Plan goes to Federal Parliament this year, to avoid further anxiety about possible changes to cuts in water use in the future. Overall, the lack of detail and rigour behind proposals in the Plan perpetuates uncertainty and saps community and business confidence in the face of the loss of water, the economic cornerstone of northern Victoria.

The proposed Environmental Watering Plan can not deliver its objectives

The proposed Environmental Watering Plan (EWP) is highly confused in terms of its roles, responsibilities and intent. It also contains critical gaps in terms of what is needed to efficiently and effectively coordinate watering across the Basin, including its integration with river operations.

The EWP is silent on how Commonwealth held water is to be used to achieve watering priorities, objectives and targets. Given the Commonwealth will ultimately hold the largest portfolio of water within the Basin, water that has been removed from communities in order to be returned to the environment, this is a serious omission on behalf of the Authority.

Overall, it is disappointing that the MDBA appears to have given limited consideration to the practical planning elements required to deliver environmental water in an efficient and coordinated way, instead deferring to the notion of 'localism' to explain this omission. As a result, proposals under the EWP are likely to be unworkable in practice, given the 'real time' nature of environmental watering decision-making.

Proposals for Water Quality and Salinity Management pose unacceptable risks

The MDBA's proposals for water quality and salinity management threaten to substantially undermine the successes already achieved by existing and well recognised northern Victorian, national and Basin-wide approaches to managing these issues. The benefits to Basin communities of imposing the MDBA's new regime are not clearly evident, nor have they been quantified by the Authority in any meaningful way.

Also highly concerning, the MDBA's proposed new targets for water quality and salinity management could be mandatory, which poses a substantial legal risk upon States and potentially other water users.

Centralisation of the Basin Plan in Canberra is not supported

Once it becomes law, the Murray-Darling Basin Plan will be a centralised, command and control regime imposed from Canberra, leading to a situation where decisions are made by the Authority, but costs are carried by the States.

Under the Commonwealth Water Act 2007, Basin State Governments will have no power to directly control the Basin Plan, yet the Commonwealth Water Act will require the States and Commonwealth to put the Plan into action, and generally prohibits them from acting inconsistently with it.

The Basin Plan will become law and the Victorian Government considers it critical that roles, responsibilities, accountabilities, rights and legal obligations be clarified in the final Plan. As it now stands, the proposed Plan hands the problems to State Governments and local communities to solve, without the structures and the funding to fix them.

Victorian regional communities and the local organisations that represent them, have been actively involved in natural resource management for many decades and expect their skills, experience and local knowledge to be fully utilised within decision-making that directly affects them. Yet, as noted above, the MDBA has not been able to follow this clear and long-established tradition of engagement as it developed the Plan, to ensure that the objectives were clear, appropriate and achievable.

Revising the Plan

The Victorian Government urges the Murray-Darling Basin Authority to substantially revise the Basin Plan legislative instrument before the Commonwealth Minister for Water takes the Plan to Federal Parliament later this year.

Many of the current proposals will adversely affect Victoria's communities, local government organisations and industries and the Victorian Government considers that these impacts stem solely from the MDBA's approach to drafting this Plan. The lack of inclusion of States' extensive policy implementation experience in the development of the Basin Plan has led to the oversight of many significant issues and resulted in the inclusion of inappropriate and ill-conceived clauses and targets that are unacceptable to State Governments on account of their impracticality to apply and enforce.

There is great scope for more work to be done to achieve environmental outcomes using less water, and the Victorian Government does not believe the Authority has yet fully explored this potential.

Continuing indiscriminate buy-back of water entitlements and the uncertainty caused by removing large volumes of water each year from productive use will negatively impact regional communities and industries, and so the Victorian Government calls on the Commonwealth to use the money set aside for water purchases to invest in environmental works as a priority.

The Victorian Government asks that sustainable diversion limits be set to provide certainty for Basin water users, and to balance this with achievable environmental outcomes that can be delivered efficiently.

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General Introduction

The Victorian Government's concerns with the *proposed Basin Plan* are outlined in detail in this submission. At a high-level, they relate to both the content and consequent effects of specific provisions within the Plan, and emerging issues around difficulty of implementation, uncertain legal obligations and likely substantial cost impacts.

The Victorian Government reaffirms its commitment to genuine reform for the Murray-Darling Basin; however as the Government has stated in a number of submissions, this must be done in a balanced way that achieves agreed environmental outcomes as efficiently as possible, and minimises social and economic impacts. These comments and suggestions appear not to have been fully taken on board by the MDBA in its preparation of the *proposed Basin Plan*.

Checklist Against Priority Concerns Raised by the Victorian Government's January 2011 Submission on the MDBA's Guide to the proposed Basin Plan

CONCERN RAISED IN JANUARY 2011	**STATUS IN PROPOSED BASIN PLAN** (**√** = MET; **X** = NOT MET)
Urgently revisit Basin Plan development approach to ensure a more balanced outcome.	**X**
All steps taken to minimise social and economic impact, while achieving ecological objectives.	**X**
Basin Plan should maintain business and community confidence.	**X**
Basin Plan supports agreed environmental, social and economic outcomes.	**X**
Basin Plan should be informed by comprehensive evidence and analysis.	**X**
Development of the Basin Plan should be transparent and informed by community-based decision making.	**X**
Basin Plan to provide smart and efficient solutions, not just more environmental water.	**X**
Need for clear implementation pathways and defined roles and responsibilities.	**X**
The Basin Plan should seek to promote sustainable water services at least cost to the community.	**X**
Basin Plan to use a management approach that builds on existing knowledge, compacts and programs.	**X**
Basin Plan to provide certainty in water sharing & management, and ensure no particular jurisdiction is unfairly burdened.	**X**

The Victorian Government is urging the MDBA to revise its draft Basin Plan so it better balances the needs of regional communities with those of the environment. This will ensure the Basin's resources are sustainably managed in the national interest. The proposed Plan cannot be supported in its current form because:

- There is considerable scope to achieve the environmental outcomes being sought with less water, and as a result, the proposed transfer of 2,750 gigalitres (GL) of held water each year to the environment poses too great an impact on regional communities and industries.
- The MDBA has not explored all options available for achieving environmental outcomes with less water, including through the use of environmental works and measures, changes to system operations and more efficient use of environmental water.
- Uncertainties associated with the implementation of SDLs pose unacceptable risks to regional communities.
- The proposed Environmental Watering Plan is not truly adaptive, contains critical gaps, and does not govern the use of Commonwealth held environmental water.
- Proposals for water quality and salinity are highly problematic, threaten to undermine existing frameworks and could be mandatory in their application.
- Roles, responsibilities and legal obligations are unclear, including the consequences of non-compliance, and identifying who pays for the large cost legacy the Plan will create.

Overview to Submission

Section 1 of the submission outlines the Victorian Government's key issues with proposals related to SDLs for surface and groundwater, highlighting that the removal of 2,750 GL of held water from surface water use does not reflect a balanced approach. As a result, the socio-economic impacts arising from this reduction are too high. Further, inconsistencies with the MDBA's technical data and modelling approach bring further into doubt the Authority's assertion that 2,750 GL is the 'right' number. Broader issues with the approach to setting and enforcing SDLs are also discussed.

In section 2, a discussion is provided of policy and technical issues related to environmental watering arrangements, water quality and salinity and water trade. Broader issues associated with Basin Plan transition and implementation are then considered in section 3 of the submission, with suggestions for a proposed way forward provided in a concluding statement. Further detail on environmental watering, water quality and salinity, State water resource plan requirements, water trade, and structural adjustment assistance is provided in the Appendices in section 5 of the submission.

It should be noted that Chapter 10 of the Plan, *Critical Human Needs*, is not discussed explicitly in this submission. The Victorian Government considers that this Chapter should mirror the arrangements that have already been agreed between Governments under the *Murray-Darling Basin Agreement* (MDB Agreement). However, the Victorian Government leaves open the option of making further comment on Chapter 10, pending any relevant content in submissions made to the MDBA by other parties on the *proposed Basin Plan*.

Section 1 - SDL Proposals Pose Unacceptable Risks

1.1 Introduction.

The Victorian Government reaffirms its commitment to genuine reform for the Murray-Darling Basin; however as the Government has repeatedly stated in a number of submissions, this must be done in a balanced way that achieves environmental outcomes as efficiently as possible, whilst minimising social and economic impacts. This position is not dissimilar to views publicly expressed by Commonwealth Government Ministers and the MDBA Chair over the past twelve months.

The final SDLs for the Murray-Darling Basin should represent a reasonable balance between agreed ecological outcomes and the impact on communities; to be provided within the existing delivery constraints that exist within the River system, including those associated with releases with the potential to deliberately flood private lands. The *proposed Basin Plan* does not do this. As a result, the Victorian Government has major concerns over SDLs and their proposed implementation.

As further evidenced by inconsistencies with the MDBA's technical data and modelling approach, there is considerable doubt over whether a 2,750 GL surface water use reduction is 'right'; with a smaller reduction having the potential to deliver the same, or similar, environmental outcomes. Given this, the socio-economic impacts that will arise from a 2,750 GL reduction in held surface water are too high.

Adding to the potential severity of these impacts, the MDBA's proposals for surface water SDLs are highly uncertain. Primarily, the MDBA's reluctance to apportion the downstream component of SDLs means the impact on individual areas could range widely, depending on how the Commonwealth chooses to 'Bridge the Gap'. In addition, the lack of a binding commitment on the Commonwealth to 'Bridge the Gap' means States could be left to comply with SDLs, on their own, from 2019.

More broadly, the MDBA's proposed 2015 Review and approach to setting and enforcing SDLs, including their introduction into State planning processes, raises a number of additional risks and impacts that compound the uncertainties outlined above.

In relation to groundwater, the MDBA's proposed reductions to productive use within key Victorian aquifers also do not represent a reasonable balance between the volume of water needed to achieve environmental outcomes and the impact on regional communities. The MDBA's proposed SDLs for groundwater in Victoria are not supported by the technical work undertaken, and are overly conservative. In addition, the proposed boundaries for Victoria's groundwater resources threaten to unreasonably restrict groundwater use and reduce the efficiency of management efforts, leading to increased reporting and compliance costs.

Each of the issues highlighted above are discussed in more detail in the next sections of this submission.

1.2 Removing 2,750 GL from Surface Water Use is Not a Balanced Approach.

Introduction

- The MDBA has repeatedly committed to providing a balance between environmental outcomes and social and economic costs.
- The MDBA's proposed 2,750 GL reduction in productive water use does not represent a reasonable balance.
- There is considerable scope for further work to achieve the environmental outcomes being sought by the MDBA with less water, and consequently far less impact on regional communities.

During its drafting of the *proposed Basin Plan* over the course of 2011, the MDBA has repeatedly committed to providing a balance between environmental benefits and social and economic costs, and claims that this has been done in setting a reduction of 2,750 GL in surface water held for productive purposes.

Despite the MDBA's statements, it is not possible to determine from information available in the proposed Plan, or in any of the associated documentation, why the Authority considers a 2,750 GL per year reduction in surface water held for productive purposes offers a reasonable and rational balance between environmental outcomes and social and economic costs.

As a result, the Victorian Government is not confident that the MDBA's commitment of balance has been met, and instead believes there is considerable scope for further work to achieve the environmental outcomes being sought by the MDBA with less water, and consequently far less impact on regional communities.

In the view of the Victorian Government, a reasonable balance is achieved when an agreed set of environmental outcomes (providing significant improvement on current conditions), is provided through the minimum volume of additional water being removed from the consumptive pool; recognising the existing system delivery constraints which have been put in place to protect communities. The Victorian Government does not believe that the MDBA has undertaken this critical work.

The Victorian Government considers the MDBA's proposed 2,750 GL reduction in surface water held for productive purposes is too high a volume to come out of, and thereby reduce, the consumptive pool.

As a result, agriculturally-based regional economies are likely to be forced to contract unnecessarily, affecting farmers, processing, freight, transport and other local businesses. As outlined in more detail further on in this submission, social effects would then be expected to follow, with higher unemployment, people leaving towns, and a likely increased need for social services, despite reduced capacity of regional organisations to provide such services.

Significant Water has Already Been Taken from Victoria

- Since 2009, Victorian communities have returned, or committed to return, over 650 GL of held water for the southern Murray-Darling Basin. In total, 1,040 GL of surface water held for productive purposes has been returned, or committed to be returned, from northern Victoria for the environment since 2000.
- This already more than meets the MDBA's proposed in-valley surface water SDLs for Victoria.
- Despite this, the total water recovery figure for Victoria cannot be determined as it will depend on how the Commonwealth chooses to 'Bridge the Gap', providing an unacceptable level of uncertainty to communities.

Since 2009, Victorian communities have returned, or committed to return, over 650 GL of held water for the southern Murray-Darling Basin. This already more than meets the proposed in-valley surface water SDLs for the State, which total 650 GL.

As discussed in more detail below, the way the MDBA has chosen to express its SDLs for surface water means that the amount of water to be returned to the environment from Victoria cannot currently be determined. However, if Commonwealth water recovery efforts are based around current watercourse diversions, a likely gap of between 350 GL and 450 GL could remain in order to meet the MDBA's proposed SDLs. It is possible that the actual figure of returned water for Victoria could be higher or lower, depending on how the Commonwealth chooses to 'Bridge the Gap' within the State.

What this implies is that a substantial volume of water may remain to be removed from Victorian communities in order to meet the MDBA's proposals for surface water SDLs under the *proposed Basin Plan*. Given the high level of uncertainty and lack of justification with regard to 2,750 GL in surface water held for productive purposes being the 'right' reduction volume for the Basin, the Victorian Government considers the likely socio-economic impacts to be too high.

Given the substantial volume of water Victorian communities have already returned to the environment, any further water returned to downstream systems needs to be fully considered and justified. The priority for any additional water for the environment should be infrastructure and on-farm programs, ahead of purchase. Environmental works and measures and smart systems operations should then be undertaken to ensure efficient use of environmental water, thus reducing the volume of water that needs to be taken from productive use.

In order to get the balance right, and provide certainty for communities, smart and efficient solutions must be developed for both the environment and productive water users.

In addition, the Commonwealth Government must make sure that its purchase program buys sufficient water to meet proposed local reductions within each valley before proceeding with purchases to meet the 'shared downstream needs reduction'. This will avoid over-buying in some catchments should the 'shared downstream needs reduction' change. It is not clear whether this is part of the Commonwealth's current purchase strategy, information on which has yet to be made public.

1.3 Socio-Economic Impacts Under a 2,750 GL Reduction are too High.

Introduction

- The Victorian Government is concerned that implementation of the *proposed Basin Plan* is likely to affect communities by reducing:
  - agricultural production;
  - social cohesion;
  - levels of income and access to capital; and
  - viability of schools, shops, medical facilities and allied health services.
- Irrigation-dependent communities will be hardest hit, and the impacts are likely to remain high over the long term for some communities.
- These impacts underpin the importance of the Commonwealth Government providing a clear structural adjustment path.

The Victorian Government maintains its view that the proposed Plan, in its current form, will have significant adverse impacts on irrigators and communities in rural Victoria, with these impacts likely to be unevenly distributed. This is particularly expected to be the case in communities highly dependent upon irrigated agriculture, and with limited alternative employment opportunities.

To properly gauge the likely full extent of the socio-economic impacts for the State's communities, the Victorian Government has undertaken a comprehensive assessment of the effects that could be expected within Victoria. These are outlined in more detail below.

Overall, the Basin Plan represents a significant reform, one that requires a fundamental shift in behaviour towards productive water use. If businesses and communities are to successfully transition, particularly those with low adaptive capacity, it is vital that a transition pathway be clearly identified and articulated to facilitate adjustment.

Outcomes of the Victorian Government's Analysis of Basin Plan Socio-Economic Impacts

The Victorian Government has undertaken an assessment of the long-term impacts upon the State's agricultural industries of a 2,800 GL reduction in productive water use across the Basin, which is equivalent to 20 per cent of water available for irrigation under the historical climate sequence. The modelling assumes a maximum reduction in Victoria of 1,127 GL (640 GL local needs plus 487 GL for downstream needs). This is comprised of 821 GL of buy-backs, 289 GL of savings from the Northern Victoria Irrigation Renewal Project and 17 GL of savings from on-farm upgrades.

Analysis undertaken has identified that the Victorian regions most likely to be affected by the Plan include the Goulburn region (including part of the Campaspe local government area), and the Mallee region (including Mildura and Swan Hill).

It is estimated that in the long-run, gross regional product is likely to be about half a percentage point lower than it would be if there was no reduction in diversion limits in both regions. This equates to annual amounts of $52.2 million and $24.4 million respectively over the long run, a substantial hit for communities that are so heavily dependent upon irrigated agriculture.

At a more detailed level, buy-back and second round trade are likely to see water sold from the Pyramid–Boort, Rochester–Campaspe, Torrumbarry and Shepparton regions. Socio-economic impacts could be greater if, due to this removal of water, tipping points are reached in vulnerable communities. This could include the closure of key food processing facilities, which are unlikely to be offset by the emergence of alternative employment opportunities in the short term.

Due to results like these, the Victorian Government remains very concerned that implementation of the Basin Plan as currently proposed will result in an overall decline in agricultural production within the State. The Victorian Government's analysis estimates that, in northern Victoria, dairy production could be $54 million lower annually than if there was no reduction in diversion limits, a decline of 12 per cent. In addition, grape production could drop by $24 million annually, representing an 11 per cent reduction, with mixed grazing experiencing a potential 31 per cent reduction, in the order of $38 million annually.

These declines in agricultural production are likely to significantly reduce social cohesion, levels of income, access to other sources of finance, and human capital. This can in turn reduce productivity and capacity to manage agricultural land (including for natural resource management outcomes).

Indirectly, the Basin Plan is likely to result in significant shifts in service availability and use, such as reduced viability of some schools, shops, medical facilities and allied health services. These effects could also be expected to be accompanied by a general decline in community confidence, optimism, health and perceived wellbeing.

On the whole, short-run impacts (i.e. especially over the next two to three years) are likely to be significantly greater than long-run impacts. Released ABARES modelling has indicated that up to 4,500 jobs could be lost in the short term across the Murray-Darling Basin, compared to the long-run estimate of 800-900 job losses under the 3000 GL water use reduction scenario contained in the MDBA's *Guide to the proposed Basin Plan*. However in some irrigation-dependent communities with limited alternative employment options, the impacts are likely to remain high over the long term.

The socio-economic impacts could also be much higher if there is to be no water trade between productive users and the Commonwealth Environmental Water Holder (CEWH), particularly during dry years. This matter is considered in more detail in section 2.5 of this submission.

Reduced employment as well as reduced farm expenditure may also: result in those seeking alternative employment leaving communities; put stress upon families to seek supplementary off-farm income; place downward pressure on house and land values; and increase dependency upon welfare.

Basin Plan Impacts Exacerbated by High Debt Exposure

The Victorian Government believes that the proposed cuts to consumptive water outlined in the proposed Plan will cause uncertainty for businesses, irrigators and financial providers across the Basin.

What is not well understood or acknowledged by the MDBA is a potential cumulative impact on Basin farming communities and regional businesses, arising from a combination of Basin Plan water reductions and current debt exposure levels, and pre-emptive changes to bank lending practice (especially regarding credit tightening). Even at moderate levels, credit tightening can severely limit the ability of Basin communities and businesses to transition to an environment of reduced productive water.

Indeed, during the past decade (influenced by the drought), there is enough anecdotal evidence pointing to a situation where increased debt levels and decreased asset values are combining to limit access to further finance. This in turn has acted to constrain the ability of communities in such circumstances to successfully adapt to new conditions.

As one example, it is probable that in the agricultural sector, not all classes of commodity producers will be able to transition to an environment with less productive water available, particularly those reliant upon the temporary water market. This can be presumed to generate flow-on effects to small to medium size businesses and other service providers in catchments dependent upon economic input from the agricultural sector.

Related to this, consultations with the banking sector[1] suggest that while they will continue to manage risk, it is difficult to address uncertainty associated with reduced water availability. For example, lack of transparency surrounding the purchase process for buy-backs has made it difficult to assess likely impacts upon farm cash flow and asset values as well as third party impacts (such as commercial and consumer clients), especially in smaller towns. Recognising the high level of indebtedness that exists among many producers and businesses within affected communities, this may further impact on their ability to access finance capital necessary to facilitate transition.

In light of the above, the Victorian Government recommends that the financial capacity of communities to transition to a reduced consumptive water pool must be properly considered by the Authority and the Commonwealth Government in any analysis of the socio-economic impacts of SDLs or development of transition policy.

Such costs and uncertainties also underpin the importance of the Commonwealth Government providing a clear structural adjustment plan that goes beyond water buy-backs and infrastructure programs. At a minimum, this should link the Basin Plan to an identified transition pathway. As highlighted in section 3.10 of this submission, assisting businesses and communities to adjust to minimise the short-run impacts of the Plan in particular, should be a focus of the Commonwealth's future transition policy for the Basin.

The issues raised above also demonstrate that mitigation actions and financial input beyond the water buy-back program will be crucial to enable communities to adapt and thrive in the new conditions.

[1] EBC, RMCG, Marsden Jacob Associates, EconSearch, McLeod, G, Cummins, T, Roth, G and Cornish, D., *Community Impacts of the Guide to the Proposed Murray-Darling Basin Plan*, Murray-Darling Basin Authority, Canberra, May 2011, especially Vol. 3: Community Impacts, p.94.

Impacts from Commonwealth Water Recovery

How the Commonwealth chooses to 'Bridge the Gap' will also strongly influence the type and severity of socio-economic impacts that can be expected. The Victorian Government considers that money reaching some farmers through buy-backs and for infrastructure upgrades will not sufficiently assist all farmers, farm workers or workers in downstream processing and service industries, particularly in areas heavily dependent on irrigated agriculture.

For example, where a fruit cannery or dairy plant closes due to reduced supply, hundreds of people in a district are impacted, not only the farmers that have sold their water rights and left the land. Service industries and providers, businesses and community organisations in nearby towns are also affected as regional production declines, or people leave the area looking for work.

In addition, modelling by the Victorian Government suggests that if temporary water prices increase due to environmental water purchases, then profits will reduce if irrigators are typically purchasing allocations to meet their watering needs.

Based on representative farm models, a doubling of the price for temporary water could reduce operating profit by 40 per cent for a water-reliant dairy farm that needs to purchase additional water, and by 18 per cent for a fodder-reliant farm. Impacts will depend on water use and substitution opportunities. Any adverse impact could escalate disproportionately if water price increases are substantial.

This can be further influenced by the Commonwealth's broader strategy for recovering water for the environment. This includes the extent to which water is returned through investment in water-saving infrastructure or changes to river operations, and the volume, entitlement type and pace of water removed through water purchases. Also influential will be the Commonwealth's water purchase mix; for example, whether it chooses to focus on high or low reliability entitlements in Victoria.

To ensure negative socio-economic impacts are minimised, the MDBA must ensure that it provides all necessary information to the Commonwealth regarding its environmental watering objectives and anticipated outcomes. The Commonwealth must also provide timely advice on its water recovery strategy to ensure certainty for affected communities.

Within these considerations, the Victorian Government maintains its position that the priority for any additional water returned should be infrastructure and on-farm programs, ahead of water purchase.

Beyond this, the MDBA and the Commonwealth must also consider options for how greater flexibility in the operation of the CEWH could help to reduce the social and economic costs of the Basin Plan. Issues related to this are considered in section 2.5 of this submission.

The MDBA must give Further Consideration to Minimising Socio-Economic Impacts

Overall, the MDBA's socio-economic impact work contains limited assessment of small, local town impacts and regionally distinct impediments to initiating effective transitional change. Further research to fill these knowledge gaps is required as a matter of urgency in order to help reveal practical steps that could be taken to facilitate adjustment and promote improved agricultural productivity.

Despite limitations in the MDBA's work, it is now well understood and acknowledged that small towns with a low level of adaptive capacity due to low socio-economic diversity, including a high dependence on irrigated agriculture, will be extremely vulnerable under the Basin Plan.

The Victorian Government is sensitive to the likely impacts of changes to water availability, with the most vulnerable towns within the State combining features of smaller population, high dependency upon agriculture and high irrigation spend per capita. Further compounding this, individually many of the State's irrigators are also experiencing high levels of indebtedness.

Reduced water availability resulting from implementation of the Basin Plan will have significant, and unevenly distributed socio-economic impacts on communities throughout the Basin. Communities highly dependent upon irrigated agriculture are at risk of significant impacts.

Adding to this, estimated decline in gross regional product associated with reduced water availability as a result of the Commonwealth's 'Bridging the Gap' program, and implementation of the final Basin Plan in Victoria from 2019, is likely to further exacerbate existing socio-economic pressures, which limits the capacity for community adjustment. Key examples of existing pressures include: prolonged drought; increasing input costs; a high Australian dollar; retraction in exports; and the lingering effects of the global economic downturn.

Across the Basin, the relative level of change as a result of implementation of the Plan may be perceived as manageable, as argued by the Authority. However, in some communities it may be the tipping point, meaning that there are likely to be distributional issues associated with the Basin Plan that so far appear to have been ignored by the MDBA.

In order to properly understand this critical risk, the MDBA must extend its analysis to incorporate the recognition of likely tipping points in highly vulnerable communities. In addition, the mix of methods for achieving environmental outcomes should be fundamentally driven by the principle of least social and economic cost.

1.4 Environmental Outcomes Achievable with 2,750 GL are Uncertain.

Introduction

- The MDBA's modelling shows that the full suite of environmental targets for the southern Basin will not be met unless environmental works become a fundamental part of the package to deliver floodplain objectives.
- System constraints to prevent the extended flooding of private land limit the volume of environmental water that can effectively be used. Given this, the same environmental outcomes can be achieved with significantly less than 2,750 GL per year.
- The MDBA must revisit its rationale for a 2,750 GL surface water use reduction, given the small environmental improvement this represents when compared to much lower water recovery scenarios for many sites.

The MDBA has released two key documents that outline the technical underpinnings of the proposed Plan, and the Authority's settlement of the environmentally sustainable level of take (ESLT)[2] for surface water in the Basin:

- *The Proposed 'Environmentally Sustainable Level of Take' for Surface Water of the Murray-Darling Basin*, November 2011 (ESLT Report[3]); and
- *Hydrologic Modelling to Inform the proposed Basin Plan*, February 2012 (Hydrologic Modelling Report[4]).

An assessment undertaken by the Victorian Government suggests that there are concerning inconsistencies in the conclusions reached by the MDBA across the two documents. This creates uncertainty around whether the environmental watering outcomes proposed to be achieved by the Basin Plan can be achieved with significantly less water than the Authority's proposed 2,750 GL surface water use reduction.

In addition, the findings of the *Hydrologic Modelling Report* in particular bring into question the strength of the MDBA's assertions that 2,750 GL is the 'right' water use reduction amount for the Basin, and indicates that similar environmental outcomes can be achieved with less water.

The MDBA's Modelling Results Show Little Difference in Outcome Across a Range of Scenarios

- The MDBA's modelling results show little difference in outcomes across 2,400 GL – 3,200 GL surface water reduction scenarios for some indicator sites.
- In some cases, none of the modelled scenarios offer any improvements substantially better than baseline conditions, due to system delivery constraints.

[2] The Environmentally Sustainable Level of Take (ESLT) has been set by the MDBA taking into account the water required to provide for ecological values and ecosystem services, the socio-economic benefits of Basin water use, and likely impacts if take is reduced. The ESLT informs the limit the MDBA sets on the volume of water that can be taken for human uses under its SDLs.
[3] http://download.mdba.gov.au/proposed/ESLT_MDBA_report.pdf
[4] http://download.mdba.gov.au/proposed/Hydro_Modelling_Report.pdf

There appears to be scope to achieve improved environmental outcomes under the Plan with less than 2,750 GL. To illustrate, Table 107 of the *Hydrologic Modelling Report* provides an overview of the maximum dry period expected between flow events for floodplains in the Basin under three water recovery scenarios: 2,400 GL; 2,800 GL; and 3,200 GL. The maximum dry period is an important component of environmental resilience, and represents one of the three main objectives of the Basin Plan's *Environmental Watering Plan* (EWP). If the dry period exceeds ecosystem tolerances, there can be long term, if not irreversible environmental consequences.

As an indicator of improved environmental outcomes under the EWP, it would be expected that the maximum dry period would decrease as the volume of water returned to the environment increased (i.e. the maximum dry period would be smaller under a 3,200 GL scenario compared to 2,400 GL).

However, using the example of Hattah Lakes, one of the Basin Plan's key indicator sites, the modelling results show little difference in outcomes across the 2,400 GL – 3,200 GL scenarios. There is also little difference in outcome when compared to a baseline scenario which reflects water sharing arrangements and levels of infrastructure as at June 2009. A summary of these outcomes is provided in Table One below.

Table One: Overview of Maximum Dry Periods Between Flow Events for Hattah Lakes.[5]

		Maximum Dry Period in Years			
Daily Flow Threshold (ML)	*Duration (Days)*	*Baseline Scenario*	*2,400 GL*	*2,800 GL*	*3,200 GL*
40,000	*60*	13 (12)	13 (8)	13 (4)	9 (4)
50,000	*60*	13 (12)	13 (12)	13 (8)	13 (8)
70,000	*42*	22 (21)	21 (21)	21 (12)	21 (12)
85,000	*30*	22 (21)	22 (21)	22 (21)	22 (12)
120,000	*14*	24	24	24	24
150,000	*7*	38	38	38	24

What the figures in Table One, sourced from the MDBA's *Hydrologic Modelling Report*, imply is that with regard to the length of dry periods, the proposed range of water recovery scenarios fail to provide any significant benefits to Hattah Lakes. In addition, none of the modelled scenarios offer any improvements that are substantially better than baseline conditions.

These results are similar for a number of other floodplain sites across the southern Basin, with more examples provided in Tables 86 to 97 of the *Hydrologic Modelling Report* for Victorian sites, and in Appendix A of this submission.

More broadly, with regard to the frequency of floods reaching various levels on the floodplain, there is again little difference between water recovery scenarios. For example, for low to mid levels of the floodplain, as volume of water returned increases, only a small number of additional flows are provided over 100 years.

[5] Figures are sourced from the Hydrologic Modelling Report. Figures in brackets are sourced from the ESLT Report.

The lack of a substantial difference in outcome across the range of examples provided above is understood to be mostly due to constraints on the delivery of environmental water in this part of the Murray-Darling system.

This finding has substantial implications for what can be achieved with the EWP, including any legal obligations on States and other holders of environmental water to deliver on targets and objectives. It also brings into question the MDBA's conclusions regarding the suitability of its proposed 2,750 GL reduction in productive water use (i.e. it is likely that outcomes could be achieved with substantially less water).

In early 2012 the Victorian Government approached the MDBA requesting that a series of modelling runs be undertaken that would help define the environmental benefits achievable under water recovery scenarios that were smaller than the 2,400 GL – 3,200 GL range that the Authority had used to inform its proposals under the Plan. This was seen as providing valuable information on the environmental improvements that could be realised under lower water recovery scenarios, and to more comprehensively test the sensitivity of the MDBA's modelling range. This request was not accommodated.

The Victorian Government is now undertaking this work on its own. Preliminary results suggest that the majority of environmental outcomes achievable under 2,750 GL could be met, or are close to being met, under water recovery scenarios much lower than this. More conclusive results are currently being finalised.

Inconsistencies in Reported Modelling Outcomes and the MDBA's Modelling Activities

- The MDBA has reported different modelling results for the same site, under the same water reduction scenarios, across two of its key technical documents.

Also highly concerning, the figures provided in brackets in Table One on the previous page, are the outcomes reported by the MDBA in its *ESLT Report* for the same site under the same set of scenarios. The *ESLT Report* provides a different set of outcomes for Hattah Lakes, which seem to strongly imply that the 2,400 GL scenario performs substantially worse than either 2,800 GL or 3,200 GL. As clearly illustrated by Table One, this analysis does not align with the modelled outcomes provided in the MDBA's *Hydrologic Modelling Report*. Similar examples exist for other floodplain sites across the southern Basin, and are provided in Appendix A to this submission.

It is unclear what steps the MDBA has taken to reach such different outcomes for the same site under the same modelled scenarios, which potentially raises doubts about the Authority's rationale for why 2,750 GL is the right figure for water recovery across the Basin. It also raises questions about the Authority's judgements regarding the appropriate balance between environmental benefits and social and economic impacts, which may not have been based on strong evidence linking ecological outcomes to water use reductions in all cases.

In addition, we understand that there are opportunities to improve outcomes from existing environmental water through more targeted use, in particular water returned through the Living Murray program.

Recent media reports[6] also suggest that SDLs could be revised, depending on how the MDBA chooses to incorporate into its modelling approach the last two years of high inflows across the Basin. Although, on its 'myth-busting' website[7] the MDBA claims that this isn't the case, the Victorian Government considers that modelling that incorporated the last two years of high flows would provide a more comprehensive picture of water availability across the system. This would also provide a more complete data-set upon which to base final SDL proposals, as it would more fully capture the extremes of inflows that can be experienced across the Basin.

[6] For example, *The Australian*, 20 March 2012, page 5.
[7] http://www.mdba.gov.au/draft-basin-plan/mythbusting#not-wrong-on-flood-data

1.5 Surface Water SDLs do not Encourage Smart and Efficient Solutions.

The MDBA has Chosen a Narrow Approach to Expressing SDLs Under the proposed Plan

- A single surface water SDL figure for the Basin, split into sub-components, represents a highly limited approach to achieving improved environmental outcomes.
- SDL arrangements, as presented in the 2012 Basin Plan, must include a specified allowance for smart and efficient solutions for achieving environmental outcomes.

The Victorian Government notes that under the Commonwealth Water Act, SDLs must determine, using the best available scientific information, a level of take that is environmentally sustainable. The MDBA has repeatedly asserted that it can and will deliver on this outcome in a way that balances the associated social and economic costs.

The substantive lack of information provided by the Authority regarding how it has set its SDLs, and the high degree of uncertainty regarding the shared downstream reduction, means that the Plan does not clearly demonstrate to Basin communities whether or not the MDBA has fulfilled its 'balanced outcome' commitment. For the reasons outlined above, the Victorian Government does not believe that this commitment has been met.

The MDBA's proposals for surface water SDLs are so uncertain that Basin communities and Governments will not be able to fully assess their impact until they come into force in 2019; which is when the shared reduction figures may be apportioned and the Commonwealth is due to fulfil its non-binding commitment to 'Bridge the Gap'.

Also concerning, the proposal of a single surface water SDL figure for the Basin, split into sub-components, represents a highly limited approach to achieving improved environmental outcomes and represents a relatively narrow approach when compared to options that the MDBA could have explored under section 23 of the Commonwealth Water Act. For example, SDLs may be set by a formula, rather than a set amount, or by any other way the MDBA deems appropriate.

As a result, the proposed approach the Authority has currently chosen is likely to substantially fetter the development of innovative and multi-benefit solutions for sustainably optimising the use of the Basin's water resources. This also means that Basin communities are likely to be unnecessarily impacted by cuts to water, when the MDBA could have explored smarter alternative solutions, capable of achieving the same, or similar environmental outcomes with less water.

In light of this, the Victorian Government urges the MDBA to re-think its approach to setting surface water SDLs in order to ensure that: any impacts to Basin communities are minimised; and SDL arrangements as presented in the next iteration of the Basin Plan, include a specified allowance for smart and efficient solutions for achieving environmental outcomes.

1.6 Uncertainties with Surface Water SDLs Pose Unacceptable Risks.

Introduction

Beyond the volume of the returned water figure proposed, the Victorian Government's concerns with the MDBA's proposals for surface water SDLs primarily relate to the high degree of uncertainty driven by:

- the inclusion of unassigned 'shared reduction' figures for the northern and southern Basin;
- the absence of any formally expressed, or binding commitment for the Commonwealth to 'Bridge the Gap' in line with its previous policy statements to that effect; and
- the MDBA's proposed 2015 Review of SDLs.

Uncertainties Associated with how Surface Water SDLs have been Expressed

- Victoria's share of the MDBA's proposed 'shared downstream needs reduction' for the southern Basin could range from 0 GL to 971 GL, depending on how the Commonwealth 'Bridges the Gap'.
- An unattributed 'shared downstream needs reduction' creates unacceptable levels of uncertainty.

The proposed cut to productive water use of 2,750 GL comprises set amounts for within-valley needs, and two 'shared reduction' figures for contributions to end of system needs from the northern Basin (143 GL) and the southern Basin (971 GL). To meet the new surface water SDLs, the Commonwealth has committed to 'Bridge the Gap' from current productive use, through a combination of entitlement purchase and investment in water infrastructure upgrades.

A definitive method that would allow the MDBA to distribute these shared reductions between States and river systems is not set out anywhere in the proposed Plan. Instead, the MDBA has chosen to express its SDLs for each SDL resource unit according to the following formula:

SDL = Baseline Diversion Limit[8] (BDL) – (in-valley component[9] + downstream shared component)[10]

Under section 6.05 of the proposed Plan, the downstream shared component for a particular SDL resource unit is described as the quantity of relevant environmental water for that unit on the day when the shared reduction target is met. For the southern connected Basin, this means the day when the Commonwealth has met its commitment to bridge the 971 GL gap that has been identified by the MDBA.

[8] This represents the baseline limit of take from an SDL resource unit (section 1.07 of the proposed Plan refers). BDLs for surface water resources are provided in Schedule 3 of the proposed Plan (Column 2 refers), and use take as at 30 June 2009 as the baseline. A reduction of 2,750 GL from this baseline delivers the MDBA's proposed new long-term average sustainable diversion limit for surface water use in the Basin of 10,873 GL per year.

[9] Local reduction amount.

[10] Shared reduction amount.

The proposed Plan does not attribute any part of the 'shared downstream needs reduction' to any particular SDL resource unit in the Basin. As a result, Victoria's share of the 'shared reduction' for the southern Basin could, in principle, range from 0 GL to 971 GL, depending on how the Commonwealth Government chooses to 'Bridge the Gap'.

Based on current watercourse diversions, just under half of the proposed 971 GL downstream reduction for the southern Basin could come from Victoria. Providing this level of uncertainty for Victorian irrigators and communities is unacceptable. The Victorian Government considers the attribution of the 'shared reduction' amount for the southern Basin is an absolute must.

Uncertainties with how SDLs will be Achieved and Implemented Under the Basin Plan

- The *proposed Basin Plan* does not explicitly enshrine the Commonwealth's commitment to 'Bridge the Gap'.
- The Plan is unclear on what will happen if the Commonwealth has not fully 'Bridged the Gap' by 2019.
- **As a result, Basin States could be left to comply with SDLs on their own, from 2019**.

As currently drafted, the *proposed Basin Plan* does not explicitly enshrine the Commonwealth's commitment to 'Bridge the Gap', nor does the Plan require that the gap be bridged by a specific date.

Despite this, under Chapter 9 of the proposed Plan, SDLs must be written into State water resource plans so they can be applied from 1 July 2019. The *proposed Basin Plan* is unclear on what will happen if the Commonwealth has not fully 'Bridged the Gap' by this date. As a result, Basin States could be left to comply with the SDLs on their own, or risk acting inconsistently with the Basin Plan.

For Victoria, there are potential legal impediments to doing this, due to inconsistencies between the water resource plan approach outlined in Chapter 9 of the proposed Plan and Victoria's existing water management framework. This is discussed in more detail in section 3.3 of this submission.

SDLs will be, by and large, implemented through the water resource plans to be developed by States. In order for State plans to be accredited, they must state the long-term annual diversion limits[11] that will apply under each plan, which requires a figure to be ascribed to the shared reduction amount for each particular SDL unit within the area of that plan (section 9.12).

As noted, the proposed Plan is currently silent on how shared reduction amounts should be apportioned. In terms of compliance, this means the Plan currently has no clear process for Basin States to satisfy water resource plan accreditation requirements as they relate to surface water SDLs, because the shared reduction component remains unapportioned until it has been met, at a date that is not specified anywhere in the proposed Plan.

[11] Long-term average sustainable diversion limits (SDLs) represent the maximum long-term annual average quantities of water that can be taken on a sustainable basis from Basin water resources as a whole, and from each SDL resource unit. A long-term annual diversion limit is the sum of an SDL and the temporary diversion provision. As the temporary diversion provision in the proposed Basin Plan is zero, the long-term annual diversion limit will be the same as the SDL (PES, pp. 46-47).

Further compounding this uncertainty, the proposed 2015 Review of SDLs under section 6.07 of the Plan allows for the MDBA to determine whether it should apportion shared reduction amounts between Basin States or SDL resource units. However, given that all proposed amendments to the Plan have the potential to be disallowed by Federal Parliament, any apportionment proposed by the MDBA may not actually be formally accepted into the Plan. Moreover, even if such an amendment to the Basin Plan is not disallowed by Federal Parliament, there will be no clarity for the States on the question of apportionment until some time in 2015 at the earliest.

Uncertainties Associated with Commonwealth Water Act Provisions

- Provisions within the Commonwealth Water Act further confuse arrangements to formally implement SDLs from 1 July 2019, with liability potentially ending up with States.

Related to the above, provisions within the Commonwealth Water Act further confuse arrangements to formally implement SDLs from 1 July 2019. Under section 56 of the Act, when the Commonwealth Water Minister makes a decision to accredit a State water resource plan, the version of the Basin Plan that is to be used is either:

- the version in place when the Basin Plan first takes effect, if the State plan is given to the Minister within two years after the Basin Plan first takes effect (i.e. 2014); or
- the version in place two years before the State plan is given to the Minister if this occurs more than two years after the Basin Plan first takes effect (i.e. after 2014).

This means that State water resource plans drafted to give effect to the 1 July 2019 SDL implementation date, that are given to the Commonwealth Minister for consideration close to this date, must be accredited against the version of the Basin Plan that was in effect on 1 July 2017, or two years before the Commonwealth is due to fulfil its 'Bridging the Gap' commitment. Processes for addressing this have not been incorporated anywhere in the proposed Plan.

Given the above, and the extremely high level of uncertainty with these proposals as they currently stand, one possible result is that from 1 July 2019, States could be legally accountable for both components of the SDL. The Victorian Government considers that the provisions in Chapter 9 are sufficiently broad as to allow the MDBA to require States to apportion the shared SDL reduction component as part of water resource plan accreditation requirements.

Essentially, State Governments are relying on a Commonwealth policy commitment not only to buy-back water, but to buy-back a certain minimum amount. If the Commonwealth fails to do this, then the States will be responsible for both components of the SDL. This is problematic as States do not know whether they can rely on the Commonwealth's current policy commitment, and therefore cannot plan ahead.

A further consequence is that States may inadvertently act inconsistently with the Basin Plan by not meeting SDLs, and hence be subject to potentially onerous enforcement provisions under Part 8 of the Commonwealth Water Act, merely because they relied to their detriment on a Commonwealth promise.

This is an unsatisfactory outcome, and must be directly addressed by the MDBA within the Plan itself, before it is presented to Federal Parliament later in 2012.

2015 Review

- The Victorian Government does not support the 2015 Review as it is currently proposed.
- The need for the Review suggests that the MDBA has not been able to determine, to its own satisfaction, the 'right' volume of water reductions for the Basin.
- Due to Federal Parliamentary process, implementation of Review outcomes is not guaranteed.
- As a result, the Basin Plan, as accepted by Federal Parliament in 2012, may be the version that stands for a much longer period than anticipated by the MDBA under its 2015 Review approach.

A strong focal point of the *proposed Basin Plan* is the inclusion of a 2015 Review of the SDLs (Review) to be included in the version of the Plan that goes to Federal Parliament in 2012.

The Review is described in section 6.07 of the Plan; its purpose is to inform the Authority, when determining whether it should propose any changes to the SDLs, or apportion the downstream reduction between Basin States or SDL resource units. The Review must be undertaken in consultation with Basin States and the community.

Primarily, the Review is being provided to allow the MDBA to undertake further investigations into environmental works or measures, river management and operational practices, methods of delivering water and new knowledge that the Authority hasn't yet had time to consider.

The Review raises expectations that the proposed 2,750 GL per year reduction in water use could be lowered, with the Plain English Summary of the Plan raising the prospect that the volume of water to be removed from the consumptive pool 'could be reduced significantly – perhaps in the order of hundreds of gigalitres' (p. viii).

The Victorian Government does not support the 2015 Review as it is currently proposed, as it only serves to increase uncertainty for those Basin communities that will be affected by cuts to productive water use.

The MDBA itself acknowledges in its *Delivering a Healthy Working Basin*[12] document that: 'the numbers could and should change, based on new knowledge … This means the numbers are a starting point' (p. vi).

The need for the Review, and its proposed scope, suggests there are significant uncertainties in the MDBA's current estimate of water use reductions. The Authority may propose that SDLs be increased or decreased as a result of the Review, however no outcome is guaranteed of implementation due to the process by which Federal Parliament scrutinises any suggested amendments to the Plan.

[12] http://www.mdba.gov.au/draft-basin-plan/delivering-healthy-working-basin

What both the Plan and Plain English Summary do not acknowledge explicitly is that any proposed amendments to the Plan are laid before Federal Parliament under the Commonwealth's *Legislative Instruments Act 2003*, where they can be disallowed.

This has substantial implications for the MDBA's use of the Review as part of an adaptive management process. Whilst there may be good intentions to amend the Plan, and the SDLs in particular, following the Review, any proposed changes could be disallowed by Federal Parliament.

Overall, the proposed Review, in its current form, introduces substantial uncertainty to Basin water planning processes and provides no clear indication of what the SDLs might be in 2019, when they first take legal effect in Victoria. This in turn creates an unacceptable level of uncertainty and risk for business planning and regional communities.

It would be more appropriate for the MDBA to adopt a reduction volume that it knows, with certainty, would be used efficiently and provide improved environmental outcomes, balanced with a clear understanding of the associated economic and social costs.

1.7 SDL Compliance Processes Pose a Number of Risks and Cost Impacts.

Uncertainties Associated with the MDBA's Proposed SDL Compliance Mechanism

- The process for determining compliance with SDLs contains a number of substantial gaps and uncertainties that potentially leave the mechanism unworkable in practice.

Beyond the key problems raised above, the Victorian Government believes that there are a number of critical process issues associated with the MDBA's proposed regime for assessing compliance with SDLs. In addition, the likely cost of implementing the MDBA's proposed new arrangements to be met by States is anticipated to be high.

One of the biggest changes from current arrangements governing productive water use in the Basin is that the Commonwealth Water Act requires the Basin Plan to include a method for determining whether SDLs have been complied with, and the extent of any failure to comply with those limits (item 8 of subsection 22(1)).

The method for determining compliance with SDLs is outlined in Part 4 of Chapter 6 of the proposed Plan, which is primarily given effect through State water resource plans under Division 2 of Chapter 9.

As currently presented in the proposed Plan, the process for determining compliance with SDLs contains a number of substantial gaps and uncertainties that potentially leave the mechanism unworkable in practice. In addition, aspects of the MDBA's compliance framework are likely to place a substantial administrative burden on States, without necessarily achieving equivalent gains in terms of improved resource management. Key related matters are discussed briefly below.

Firstly, under section 6.13, in determining whether there is non-compliance with an SDL, the balance of water use within the SDL resource unit must be adjusted to account for any disposal or acquisition of held environmental water within that unit during the accounting period. Nowhere in the SDL compliance process has the MDBA provided for a similar accounting allowance for trade of non-environmental entitlements and allocations.

This is a serious omission on the MDBA's behalf as irrigator trade between SDL resource units will create credits for the seller and debits for the buyer, possibly leading to non-compliance in the SDL unit receiving the trade. This must be addressed by the MDBA, within the Plan, as a matter of urgency.

Also problematic, when calculating compliance, the MDBA has provided a 20 per cent error margin above the SDL for each resource unit, to cover model and data uncertainty. The 20 per cent is a cumulative balance and hence is not re-set each year.

The Victorian Government contends that a 20 per cent margin is too small to adequately cover the range of model and data uncertainty associated with setting and enforcing SDLs for the Basin. Internal Victorian Government estimates find it is in effect at least 30 per cent smaller in real terms than the current error allowance under the Basin Cap.

To illustrate, a recent MDBA study shows that on Victoria's Goulburn/Broken/Loddon system, a reduction in trigger volume by around 160 GL under SDLs would generate inappropriate triggering, in the order of around 8 out of 10 years over the long run.

As a result of these matters, there is a real risk that in operating under such a narrow error band, States may be assessed as being non-compliant with a particular SDL due to model error, rather than due to 'over-use' of Basin water resources. The consequences to the States, and agencies of the States, of such a non-compliance are not insignificant, both in terms of legal ramifications (i.e. under Part 8 of the Commonwealth Water Act), and the resources required to deal with them.

Also related to the above, under section 6.09(6) the MDBA is proposing that when compliance arrangements formally commence from 30 June 2019, the cumulative balance for each SDL resource unit, in terms of credits and debits below and above each limit, will be set at zero. This means that all credits accumulated under the existing Basin cap arrangements will not be formally recognised by the MDBA under its new compliance mechanism. This approach is highly unsatisfactory as it effectively penalises responsible State behaviour up to 2019 (in Victoria's case, this would equate to 23 years of credits being wiped off the books), and substantially increases the risk of non-compliance with SDLs after 2019.

Integral to the MDBA's ability to effectively determine compliance with new limits on productive use will be the accuracy of assessments of both baseline diversion limits (BDLs) and sustainable diversion limits (SDLs), both of which are modelled outcomes.

Under existing arrangements, States' cap models are independently audited; however under the proposed Plan the MDBA does not require BDL and SDL models to be accredited. The Victorian Government contends that there must be an accreditation process that builds on existing cap model accreditation.

Unreasonable Cost Impacts Associated with Water Accounting Requirements

- The MDBA's proposed accounting requirements as they relate to farm dams and plantations offer little benefits for the large cost of implementing them.

Section 9.14 of the proposed Plan requires States, through their water resource plans, to determine the quantity of water permitted to be taken by 'each form of take' for all consumptive use in each SDL resource unit. Under the Plan, this includes take under a basic right (e.g. stock and domestic use), take by a runoff dam or net take by a commercial plantation.

For Victoria, and likely for other Basin States as well, calculation of permitted and actual take from farm dams and plantations will be difficult, costly and inaccurate. A study by the former Murray-Darling Basin Commission under its *Six Risks Program* estimated that annual growth in the number of farm dams in the Goulburn, Broken, Ovens and Kiewa catchments between 1994 and 2005 was about 0.1 per cent. This figure is quite low. The MDBA has not demonstrated that the benefits of the proposed accounting requirements as they relate to farm dams and plantations outweigh the large cost of implementing them.

More recent work in Victoria (*Improving State-Wide Estimates of Farm Dam Numbers and Impacts - Stage 3 – State Wide Rollout Report*, SKM, February 2012) has demonstrated further that estimates of farm dam numbers and associated volume of take are inaccurate.

In the absence of significant investment to improve measurement and monitoring capability, it is unlikely that dam volume and usage figures calculated through existing mechanisms will hold sufficient credibility for users of these forms of take. In addition, the likely gains to be achieved from such efforts in terms of improved resource use are not clear and are not likely to be commensurate with the expected cost impact.

Beyond this, there are potential legal impediments to fulfilling the MDBA's requirements in this regard as legislative change is likely to be needed in order for Victoria to be fully compliant. Issues around this more broadly are discussed later in this submission.

1.8 The MDBA Must Revise its Proposed Groundwater Boundaries for Victoria.

Issues Associated with the MDBA's Proposed Groundwater Boundaries for Victoria

- The MDBA's proposed boundaries for Victoria's groundwater resources threaten to unreasonably restrict groundwater use and reduce the efficiency of management efforts.
- This is expected to lead to increased and more complex reporting, and increased compliance costs.

The MDBA's proposed boundaries for Victoria's groundwater SDL resource units have the potential to reduce efficiency in the management of groundwater resources, leading to increased and more complex reporting, and increased compliance costs.

In light of this, the Victorian Government **requests** that the MDBA **make amendments** to its Plan so that it includes only **two groundwater SDL areas in Victoria**: one aligned with the Wimmera-Mallee Water Resource Plan Area; and the other aligned with the Goulburn-Murray Water Resource Plan Area. Within these areas, the Victorian Government requests that:

- individual SDL volumes apply to the Shepparton Irrigation Region (to 25m), the Highlands and the Sedimentary Plain within the Goulburn-Murray SDL area; and
- within the Wimmera-Mallee SDL area, individual SDL volumes apply to the Highlands and the Sedimentary Plain.

As noted, the Victorian Government's preferred approach is for the MDBA to increase the scale of the area to which groundwater SDLs are assigned, to match the proposed groundwater water resource plan areas for the State. This provides a consistency with both current and proposed management frameworks in Victoria.

Beyond this, the Victorian Government is seeking the exclusion, by regulation, of the West Wimmera area from the Basin Plan. The West Wimmera groundwater area is a relatively minor resource of marginal groundwater quality, which extends outside the surface water Murray Basin boundary, and is effectively disconnected from the Murray River. On this basis, there is no strong reason (e.g. over-allocation, surface water connectivity), why the extensive provisions of the Basin Plan should apply to this area.

In addition, the Victorian Government **requests** that the **MDBA revise its descriptions of Victorian groundwater SDL water resource units**, so they more clearly articulate the groundwater resources that are to be managed, and include depth limits in its SDLs, that are commensurate with the depth the MDBA's analysis methods have been applied to.

The Victorian Government understands that the MDBA has given its 'in principle' support to the revisions outlined above. The Authority also supports 'in principle', the exclusion of the West Wimmera groundwater area from the final Basin Plan. A submission will be made to the Commonwealth Government to formalise this arrangement under the Commonwealth Water Act.

1.9 Baseline Diversion Limits Have Been Set Inconsistently Across the Basin.

Uncertainty and Inconsistency in the Determination of Baseline Diversion Limits (BDLs)

- The approach to determining BDLs for groundwater in Victoria, and other States within the Murray-Darling Basin, is inconsistent.
- Inconsistencies in the MDBA's policy rationale for setting BDLs has led to a conservative outcome for SDLs within Victoria, particularly when compared to New South Wales.
- As a result, the MDBA expects groundwater use in Victoria to be reduced, whilst it is allowing substantial increases in groundwater use in New South Wales.

Whilst the MDBA expects groundwater use in Victoria to be reduced under its proposed Plan, it is allowing substantial increases in groundwater use in New South Wales, and has not provided any satisfactory justification for this inconsistency.

The technical and policy approaches developed by the MDBA are unreasonably applied within Victoria, and inconsistently applied between the States. This results in cuts in entitlement of 61 GL in Victoria's most productive agricultural areas.

In addition, the Victorian Government considers that there should be an increased SDL for the State's upland areas by 26 GL, which provides for application of a consistent approach with bordering areas in New South Wales.

The substantial change from the MDBA's October 2010 Guide and its November 2011 proposed Plan is in part due to planned volumes within existing State frameworks for groundwater management being treated very differently by the Authority between Victoria and New South Wales. Namely, the MDBA has chosen to recognise groundwater extraction limits contained in water sharing plans in New South Wales, but has not fully recognised similar plans within Victoria.

The Victorian Government's current approach to managing groundwater is primarily based around Permissible Consumptive Volumes (PCVs). PCVs effectively cap the total volume of groundwater that can be used in a particular area. They are an effective management tool, and form a fundamental part of Victoria's long standing approach to groundwater management.

For the purposes of developing BDLs, the proposed Plan only recognises Victoria's PCVs if they apply to an area that has a groundwater management plan. For groundwater management areas without plans, only entitlement is recognised.

To illustrate, the PCV for Victoria's Lower Ovens Groundwater Management Area is not recognised, as it has a plan under development, but it is not yet complete. However, PCVs for the former Campaspe Deep Lead Water Supply Protection Area are recognised, as this area previously had a plan in place.

Further, the Katunga Water Supply Protection Area has a groundwater management plan in place, which currently only allows 70 per cent of the PCV to be utilised. The current plan recommends this as an annual restriction on entitlement. Whilst this restriction has been in place since the plan was approved in 2006, through the driest years on record, it does not preclude a return to 100 per cent allocation (i.e. or the full PCV), if appropriate conditions prevailed.

The MDBA has chosen to set the BDL in this area at 70 per cent of the PCV, not recognising that under the existing plan up to 100 per cent of the PCV could be sustainably utilised under the right conditions. This effectively places an unstated hard wired limit on future use for affected areas, without a sound basis of evidence provided by the Authority.

In addition, by not recognising the full PCV in the Katunga Water Supply Protection Area, the current BDL is underestimated by 30 GL. This represents a consequential underestimation of the SDL of 30 GL.

For these reasons, the Victorian Government **requests** that **both the BDL and the SDL** for the Goulburn-Murray: Riverine Sedimentary Plains **be based on 100% of the PCV for Katunga**, plus domestic and stock use. **This will remove any 'gap'**.

However, **should the MDBA refuse** to apply the PCV in its BDL and SDL consideration in Katunga, **the Victorian Government expects** that under the 'Bridge the Gap' commitment, **the difference will be secured through Commonwealth buy-back of entitlements**.

Beyond this, the Victorian Government believes that the BDLs that have been set for the State's groundwater resources are not based on the most up to date information. The Victorian Government has recently undertaken studies to more correctly locate bores, and has provided updated figures to the MDBA on current groundwater use. The Victorian Government has also accounted for dairy wash bores within its licensing framework.

In light of the above, the Victorian Government **requests** that the MDBA **update its BDLs** for Victoria's groundwater resources so that they **incorporate additional entitlement** where recent correction of bore locations has altered figures, and dairy wash licences have been increased to recognise existing use.

1.10 Victoria's Groundwater SDLs are Unreasonably Conservative.

Issues with Modelling Outputs Used to Set SDLs

- The MDBA has based its SDLs for Victorian groundwater resources on unreasonably conservative outputs from its modelling of key aquifers, particularly the deep aquifer in the State's Riverine Plains.
- As a result, there appear to be a number of substantial and problematic inconsistencies in the way the MDBA has determined groundwater SDLs within Victoria.

Two technical approaches underpin the calculation of SDL volumes in the proposed Plan. The first is a numerical modelling approach (*the Southern Riverine Plain Model – SRPM*). This numerical model was developed for the MDBA by CSIRO and SKM, with limited consultation with Victoria.

The second approach is the *Recharge Risk Assessment Method (RRAM)*, which estimates sustainable yield based on estimates of recharge rates to the surface aquifer.

The recommended SDL volumes from the CSIRO/SKM modelling report[13] are not consistent with those reported by the MDBA as the modelled outputs. In addition, the peer review report[14] for the modelling notes that the model is fit for purpose; but highlights that the MDBA's approach to determining the groundwater SDLs for the Southern Riverine Plain is conservative, as: the flood recharge is not considered; and the application of an 'uncertainty' factor that effectively reduced modelled outputs by approximately 20%, was considered to be severe.

The MDBA peer review also notes the need for a sensitivity analysis. This does not appear to have been done. For broader acceptance of the model, the Victorian Government requests that greater sensitivity analysis of the input variables be undertaken to better understand the range of confidence in outputs, and that the MDBA undertake this work as a matter of urgency.

Beyond this, the Victorian Government contends that, without greater sensitivity analysis including flood recharge, it is not reasonable for the MDBA to apply this uncertainty factor to the SDL estimates from the Southern Riverine Plains Groundwater Model. The Victorian Government therefore **requests** that this uncertainty factor be **removed** which would allow for an **increase in the SDL** for this area of **40 GL**.

The method to determine SDLs for the Lachlan Fold Belt in New South Wales is based on 100 per cent of recharge. For the same geology in the Victorian Highlands, the SDL is set at BDL + 50 per cent of unassigned water, or in several cases just the BDL. Consequently, if the NSW approach to determining SDLs was applied to Victoria, an estimated additional 26 GL would be made available for consumptive use in the State's highland areas.

[13] CSIRO and SKM, *Groundwater Modelling Report – Southern Riverine Plains*, November 2010.
[14] Heritage Computing, *Peer Review of the Southern Riverine Plains Numerical Groundwater Model*, October 2010.

In light of this, the Victorian Government **requests** that the MDBA **revise its SDLs** for Victoria's groundwater resources so that the same principle and approach is applied to setting the SDLs for the Lachlan Fold Belt and the Victorian Highlands. Adoption of this approach would, in the Victorian Government's view, allow for a combined **increase in the SDLs** for the Victorian Highlands of **26 GL**.

The Victorian Government is also concerned by other broader inconsistencies within the MDBA's approach to setting groundwater SDLs across the Basin, particularly the approach to determining SDLs in highly connected alluvium systems and highland areas across the Basin.

The MDBA's differing approach to calculating groundwater SDLs in highly connected alluvium systems across the Basin further highlights the general inconsistency of how the Authority has applied its methodologies. For example, it appears that more water has been made available for consumptive use within certain alluvium systems in New South Wales and Queensland, but not within Victoria. Key areas where this is the case include the St George, Warrego and Upper Darling alluviums.

The Victorian Government requests that the MDBA undertake a demonstrated consistent approach for Victoria's alluvium areas that aligns with that undertaken for other States.

1.11 The Definition of Groundwater SDL Resource Units is Impractical.

Uncertainties Associated with the MDBA's Identification of Groundwater SDL Resource Units

- The way the MDBA has defined SDL resource units is impractical, and could create perverse outcomes for future management efforts.

Section 6.03 and Schedule 4 of the proposed Plan describe ten groundwater SDL resource units for Victoria, specifying fifteen SDL volumes across those units. The 10 SDL resource units for Victoria cover the surface water catchment of the Murray Basin to all depths. As previously stated, the ten resource units described for the State do not correspond with the current or proposed management framework in Victoria.

Application of the MDBA's proposed groundwater SDL resource units for Victoria will apply significant constraints to the reasonable management of connected groundwater resources in the State, and threaten to create unworkable reporting requirements.

To illustrate, the use of aquifer names to assign SDL volumes creates uncertainty, as not all aquifers are currently fully described. In particular, it creates uncertainty as to whether SDL volumes apply to other unnamed aquifers and aquitards, which leads to the potential for inconsistent application of SDLs.

More problematic however, the MDBA is proposing that SDLs apply to all groundwater extraction to all depths. This threatens to place unreasonable restrictions on deep activities such as development of geothermal resources, mining, and oil and gas extraction.

It is also a highly unreasonable approach given the Victorian Government understands that the methods used by the MDBA to estimate SDLs only included the watertable or surface aquifer, or the sedimentary layers modelled. They did not include groundwater in formations deeper than this.

The Authority should not be applying SDL volumes to groundwater resources they were not estimated for, particularly given that deeper aquifers may have a limited connection with the Murray River surface water systems. On this basis, a depth limit is considered by the Victorian Government to be a more appropriate approach.

For example, this could be done by assigning SDL volumes to different aquifer layers within an SDL resource unit, provided definitions clearly incorporate all of the aquifer sequence, and have a depth limit commensurate with the depth to which SDLs have been calculated.

Beyond these matters, it is unclear how the Authority has considered and incorporated Managed Aquifer Recharge (MAR) into its accounting for SDLs. The key risk posed by this lack of clarity is that any uncertainties in accounting for MAR schemes or volumes may limit and delay sensible approaches to resource management using MAR.

Section 2 - Proposed New Arrangements Beyond SDLs are Impractical

2.1 Introduction.

In addition to the issues raised in section 1 of this submission, other elements of the *proposed Basin Plan* pose substantial risks to the Victorian Government, its agencies and its communities. Section 2 of the submission will consider these issues in more detail, as they relate to elements of the Plan that deal with environmental watering, water quality and salinity management, and water trade.

Primarily, key issues associated with these Chapters is that they are highly prescriptive, contain critical process gaps, do not align with existing State frameworks and do not allow for a sufficient transition time under which the Victorian Government could align its current regimes with the new arrangements proposed.

In particular:

- The proposed Environmental Watering Plan (EWP) is not truly adaptive, contains critical gaps, and does not direct the use of Commonwealth held environmental water.
- Proposals for water quality and salinity are highly problematic, threaten to undermine existing frameworks and could be mandatory in their application.
- Aspects of the MDBA's proposals for water trade do not align with current State arrangements, could be subject to legal challenge, and contain gaps in accounting arrangements that could affect the State's compliance with SDLs.

Each of the issues highlighted above is discussed in more detail in the next sections of this submission, with further information provided in the Appendices in section 5.

2.2 The Basin Plan's Environmental Watering Plan (EWP) is Not Truly Adaptive.

The Proposed Environmental Watering Plan is Overly Prescriptive and Contains Critical Gaps

- The proposed Environmental Watering Plan (EWP) is highly confused in terms of its roles and responsibilities and intent.
- It also contains critical gaps in terms of what is needed to effectively coordinate watering across the Basin, including its integration with river operations.
- Proposals under the EWP are likely to be unworkable in practice given the 'real time' nature of environmental watering decision-making.

The vast majority of learning around environmental watering has been with small volumes of water during the recent drought, combined with a few recent undertakings to co-ordinate delivery of larger volumes of water to benefit several sites progressively down the river. These latter exercises have proved highly complex and in turn, have raised a number of policy issues that would require resolution to settle effective long term arrangements. Arrangements where a single party will hold a large portfolio of environmental water have not been tested as yet, and it will be critical that management of this water is integrated with river system operations to ensure it is efficiently managed.

The provisions of the Commonwealth Water Act for the EWP are amongst the most detailed and prescriptive of the requirements for mandatory Basin Plan content. They are translated into the *proposed Basin Plan* in Chapter 7.

At a high-level, the Water Act requirements do not actively prevent the establishment of effective, adaptive watering arrangements for the Basin. However they must be interpreted in a way that enables these types of management outcomes to occur. This is critical given the current level of understanding of, and interest in, environmental watering within the Basin.

It is essential that the EWP deliver environmental water efficiently to achieve environmental outcomes. It should be adaptive, allow for learning over time, and provide for the development of the most suitable arrangements for Basin watering activities.

To a certain extent, Chapter Seven must be presented as a 'practitioners' Chapter to ensure that key learnings can be incorporated into Basin watering arrangements in a timely way. However, the Chapter must also be constructed in a way that provides clear guidance for the practical use of Commonwealth held environmental water, to give confidence that it will be used efficiently to achieve agreed environmental outcomes.

On the whole, the MDBA has taken an excessively narrow and overly prescriptive approach to interpreting the Commonwealth Water Act requirements for the EWP. As a result, Chapter 7 of the Plan is highly confused in terms of its roles and responsibilities and intent, contains critical gaps in terms of what is needed to effectively coordinate watering across the Basin, and does not integrate environmental water delivery with river management. As a result, it is likely to be unworkable in practice given the 'real time' nature of environmental watering decision-making.

As a first step, the Victorian Government would recommend that any prescription under the EWP be kept to guidelines which can then be adapted with further experience and knowledge.

Given the potentially binding nature of this Chapter, and the inability to amend either the Chapter or its associated Schedules without Federal Parliamentary approval, the EWP in its current form poses substantial risks to Governments and other environmental water holders across the Basin. These risks largely stem from:

- whether the objectives and targets that have been set for the EWP are appropriate;
- the proposed establishment of an environmental water management process under the EWP that is incomplete and contains substantial gaps with regard to decision-making, roles and responsibilities in particular, with respect to the level of obligation imposed upon the Commonwealth Environmental Water Holder (CEWH); and
- no linkage between the EWP and river operations, to ensure that efficiencies of operations including the smart use of consumptive water to deliver environmental outcomes, are identified and put in practice.

Each of these issues is discussed in more detail below. More detailed comments on Chapter content, including discussion of key problematic clauses, can be found at Appendix B.

2.3 Achievement of Objectives and Targets Under the EWP is Not Certain.

Issues with Chapter Seven Objectives and Targets

- The EWP's objectives do not reflect outcomes that can be achieved solely with the water that is recovered to meet SDLs.
- As a result, it is unclear to what extent the provision of more water under the EWP will contribute to objectives, which means that State obligations are currently unclear.
- The MDBA's proposed targets to inform progress towards EWP objectives do not recognise system delivery constraints, and cannot be measured and reported on.

Many of the objectives contained in Part 2 of Chapter 7 are broader than can be achieved by water alone. This is acknowledged by the MDBA itself, who describe the objectives as 'both broad and ambitious',[15] and as noted in section 7.02(2) of the Chapter, will only be met in part by the provision of environmental water. Beyond the provision of water, many of these objectives would also require land management actions or changes to existing policy (including the possible buy-back of land), in order to be achieved.

The objectives, as currently presented in Part 2 of the Chapter, have the potential to be highly misleading to communities who may be expecting that they can be both fully and regularly achieved, if the MDBA's proposed 2,750 GL reduction in held surface water use is met.

The objectives also demonstrate that most outcomes for water-dependent ecosystems in the Basin cannot be met solely through the provision of more water. The most the MDBA can effectively do through its EWP is provide a flow regime that supports the final approved objectives, recognising the realities of delivery constraints across the Basin, and acknowledging that other measures would also need to be undertaken for the objectives to be fully achieved.

Part 3 of Chapter 7, and Schedule 7 of the proposed Plan, set out the targets that the MDBA has set to inform progress towards the EWP's objectives. As presented in Schedule 7, these targets are not currently measurable, and do not provide a set of clear outcomes that in practice would demonstrate real progress towards the EWP objectives.

For the Schedule 7 targets, at a minimum a baseline condition would be needed that recognises and allows for the variation in condition that occurs in dry years and in years following flood. This would ensure that there is no false conclusion that environmental condition has worsened or improved because of a change in climatic conditions, as opposed to increased volumes of water being made available for the environment. The MDBA has not identified a process anywhere in the proposed Plan that would provide for this.

On the whole, Basin communities, whether those bearing the costs of water taken from productive use, or those who have a strong interest in the ecological sustainability of the Basin, are not likely to be satisfied with broad aspirational targets that cannot be met and that do not provide any meaningful insight on progress towards achieving the overall objectives of the EWP.

[15] http://www.mdba.gov.au/draft-basin-plan/supporting-documents/ewp/ewp_ch2

This type of approach will not provide communities with useful information as to what the Basin Plan actually achieves with the water being returned. The Victorian Government considers this to be a very reasonable question to ask, especially given the uncertainty stemming from the inconsistencies in the MDBA's technical information, outlined previously.

The targets that the MDBA includes in Chapter 7 should give communities, confidence that there has been sound thought put into determining what needs to be, and can be, achieved with both the EWP and the water returned to the environment under the SDLs.

2.4 The EWP Contains Critical Process Gaps.

Incomplete Water Management Process

- The MDBA has not provided information regarding how decisions on watering priorities will be made.
- The MDBA has not included a process for coordinating environmental watering decisions with river operators or other holders of environmental water.
- The MDBA appears to have given limited consideration to the practical planning elements required to deliver environmental water in an efficient and coordinated way.

Part 4 of Chapter 7 outlines the MDBA's proposed Framework for coordinating Basin watering activities. As it stands, the Victorian Government is not sure how this Framework will be applied in practice, and key elements of the Authority's proposed new planning approach appear to be missing. There is a high risk that the Framework will result in confusion about how decisions will be made, on what, and by whom.

Whilst it would not be appropriate to have the full suite of detail contained within the Basin Plan legislative instrument, the complete process does need to be articulated by the MDBA, including its expectations around roles, responsibilities and decision-making.

The MDBA has not provided a clear process for determining which sites will be allocated water. After the Authority has listed the priority sites across the Basin under section 7.25, the Chapter is silent on the decision-making to be used to ensure that water is directed to achieving the best environmental outcomes. This is highly concerning as environmental watering generally requires 'real-time' decision-making, particularly when using held entitlements, to ensure that watering outcomes are maximised and water for the environment is used as efficiently and effectively as possible.

Also problematic, section 7.25(5) of the proposed Plan requires that the list of Basin priorities be finalised and published on the MDBA's web-site before the commencement of the water accounting period to which they relate. This means the list will be finalised without prior knowledge of what the forthcoming season may bring in terms of climatic conditions.

It is unclear whether the MDBA will require that the list be followed faithfully in order of priority, or if it will be used to guide decisions on which sites will receive water as water availability, rainfall and river behaviour become clearer across the year. The Victorian Government strongly recommends that the MDBA adopt the latter approach.

Smarter Systems Operations must be Taken into Account

- The MDBA appears to have given little or no consideration to the substantial efficiencies that can be achieved through smarter use of consumptive water to deliver environmental outcomes.

As noted in previous sections of this submission, the Victorian Government considers that the strategic uptake of both environmental works and measures, and smarter systems operations would ensure more efficient use of environmental water, thus reducing the volume of water that needs to be returned from productive use. The Victorian Government maintains its contention that there are both substantial efficiencies to be gained, and water savings to be achieved from smarter systems operations in particular.

Given this, it is concerning that the MDBA appears to have given little or no consideration to the importance of coordinating environmental watering with existing river operations for productive use, to ensure that the benefits to be gained from held environmental entitlements (which in many cases, hold similar characteristics to consumptive entitlements) are maximised. Given the large portfolio of entitlements that will be held by the CEWH, and the large volume of environmental water that will be moving around the Basin under the EWP, efficient coordination of river operations will be critical.

In addition, the omission of a role for river operators under the EWP represents a critical gap in relation to the MDBA's proposed 2015 Review, within which the Authority is required to consider its view in relation to possible adjustments to SDLs in part based on matters associated with river management and river operational practices (section 6.06 of the proposed Plan refers).

As a matter of urgency, the Victorian Government requests that the MDBA clearly articulate its intended process for coordinating environmental watering decisions with existing river operations.

Related to this, coordination with other environmental water holders will also be important, and the MDBA should ensure that it has appropriate processes in place to allow for this as well.

Beyond the setting of priorities, establishment of a clear process for decision-making, arrangements for use of CEWH water and coordination with river operations, delivery plans will also be needed to effectively coordinate watering across sites, and across the Basin. Such plans are needed to optimise delivery of environmental water and productive water. As experience under other Basin watering activities (e.g. *The Living Murray Program*) has shown, they are critical for large-scale, multi-site watering, which requires the integration of a number of different entitlements.

This is a practical requirement that goes beyond what can feasibly be achieved through States' long-term watering plans under Chapter 7 and water resource plans under Chapter 9. However the MDBA appears to have given no consideration to this need, or provided a process which would allow this to be formally incorporated into Basin watering activities.

Whilst this issue requires further, immediate consideration in order for the EWP to work in practice, it should be addressed by the MDBA in a way that enables responsiveness and learning, by not locking in prescriptive and onerous requirements into Chapter 7.

Given the comments raised above, the Victorian Government strongly recommends that the MDBA first determine its intentions, in consultation with Basin States, for how environmental water management will work in practice. It is essential that this step is taken first, and that decisions on what needs to be in Chapter 7 of the proposed Plan are then made, taking into account the requirements of the Commonwealth Water Act.

Localism in Environmental Watering

- The Victorian Government already has well-established mechanisms in place for seeking local input.

The Victorian Government already has well-established mechanisms for seeking the input of local communities in key planning processes. These include:

- regional waterway strategies, which are developed every eight years and identify priority river reaches and wetlands in each region;
- environmental water management plans, which outline long-term environmental objectives for each identified priority system/site; and
- seasonal watering proposals, submitted by catchment management authorities to the Victorian Environmental Water Holder to identify priority watering actions in a given year.

These approaches ensure that environmental water planning is integrated into broader river and wetland health programs, both of which are underpinned by community input.

The Victorian Government's current approach delivers a strong, targeted and regionally-based consultative process in environmental water planning that it considers already meets both MDBA and Commonwealth objectives in this respect.

As such, the Victorian Government would expect that its approach would be accepted by both the MDBA and the Commonwealth as the one that is used for local community involvement in environmental water activities.

2.5 The EWP Does Not Govern Use of Commonwealth Environmental Water.

There is No Clear Guidance for Use of Commonwealth Held Environmental Water

- The EWP is silent on how Commonwealth held water is to be used to achieve watering priorities, objectives and targets.
- Beyond this, the less flexibility the CEWH has regarding its ability to trade and carryover water, the higher the likely costs to communities and consumptive water users.

The Victorian Government understands that one of the fundamental principles underpinning the purpose and intent of the Basin Plan is that it removes water from the consumptive pool, which is then transferred to held environmental entitlements, the delivery of which the CEWH then manages in order to achieve the environmental outcomes being sought.

It is therefore highly concerning that the current version of Chapter 7 is silent on how water held by the CEWH is intended to contribute to the achievement of Basin environmental watering priorities, and the targets and objectives of the EWP. Given the CEWH will ultimately hold the largest portfolio of environmental water within the Basin, water that will have been removed from communities with the express purpose of being returned to the environment, this is a serious omission on behalf of the Authority.

Water returned to the environment under the Commonwealth's 'Bridging the Gap' commitment must be managed in line with the EWP, if progress is to be made towards achieving the objectives and targets that have been specified by the MDBA. This is of special concern as States will be obliged under the EWP to report on achievement of targets at priority assets, which requires delivery of Commonwealth held environmental water. This must be addressed by the Authority as a matter of urgency.

Related to this, the future trading practices of the CEWH have the potential to strongly influence the type and severity of socio-economic impacts that can be expected. Such a scenario could arise if, amongst other drivers, the CEWH chooses to buy water in drier years. This reiterates the importance of ensuring the CEWH adopts behaviours that allow it to meet environmental objectives under the Plan in a way that minimises any unnecessary social and economic costs.

This builds the case for an iterative approach to implementation, where policy settings are adjusted over time. At present, the proposed Plan does not provide for this, given that it cannot be guaranteed that suggested amendments to the Plan will be accepted by Federal Parliament. Given this, the Victorian Government repeats its assertion that all onerous requirements under the proposed Plan be moved to guidelines which can then be adapted with further experience and knowledge.

Also relevant, but as yet largely unexplored by either the MDBA or the Commonwealth, the less flexibility the CEWH has regarding its ability to trade and carryover water, the higher the likely costs to communities and productive water users. Victorian Government modelling suggests that allowing the CEWH greater flexibility to trade and carryover water could reduce costs to agriculture by around half. The costs to agriculture could also be lower if the CEWH was able to sell temporary water during dry years.

2.6 Proposals for Water Quality and Salinity are Highly Problematic.

The MDBA's Proposals for Water Quality and Salinity Pose Substantial Risks

- The MDBA has proposed a suite of water quality targets that in practice are much more restrictive than those already in place, leading to perverse and unintended management outcomes. They also pose substantial risks due to legal uncertainty regarding their status as either mandatory or aspirational.
- The Authority has provided insufficient evidence supporting the need to discharge a minimum of two million tonnes, per year, of salt from the River Murray system to the Southern Ocean.
- The MDBA's proposals have the potential to undermine existing Victorian and national risk-based frameworks for water quality management, including as they relate to the continued provision of safe and reliable drinking water and water supplies for irrigation.
- The Victorian Government is not convinced the MDBA has adequately analysed the efficiency, effectiveness and administrative implications of applying the new suite of targets proposed.

The Victorian Government considers that the proposals contained in Chapter 8 of the proposed Plan threaten to substantially undermine, and potentially reverse, the successes already achieved within northern Victoria and across the southern basin with respect to salinity and water quality. Chapter 8 appears to have not been adequately assessed from an efficiency, effectiveness and administrative perspective.

Perhaps more concerning, despite the high potential costs and risks posed by this Chapter, the benefits to Basin communities of imposing the new regime envisaged by the MDBA are not clearly evident, nor have they been quantified by the Authority in any meaningful way. On the surface at least, the rationale for these proposals appears to be less sound than that used to justify requirements under other key elements of the Plan, including SDLs and the EWP.

The following provides a high-level overview of Victoria's fundamental concerns with Chapter 8 of the proposed Plan. More detailed comments on specific Chapter content, including discussion of key problematic clauses, is provided at Appendix C.

As highlighted by one of the key requested actions listed at the start of this section, activities needed to achieve the MDBA's proposed targets under Chapter Eight have the potential to impose large costs in their implementation. This is likely to lead to unfunded obligations across the Basin, with the consequences these have for Basin State Governments and other water users currently unknown.

The Victorian Government considers that costs associated with this, would have to be viewed as another aspect of 'Bridging the Gap', related to water quality compliance.

In-line with this, the MDBA should revise its proposed arrangements for water quality and salinity management, to ensure future processes are not cumbersome, or overly bureaucratic. It is critical that arrangements under Chapter 8 achieve efficient and cost effective water management and administrative practices, as required by the Commonwealth Act.

2.7 The Restrictive Nature of Proposed Targets is Impractical.

Issues with the Restrictive Nature of Proposed Targets

- Restrictive targets, within a narrow range of water quality and salinity characteristics, ignores the natural variability of the southern Basin and is inconsistent with the National Water Quality Management Strategy.
- Restrictive targets will ensure a high degree of technical non-compliance in practice.

Chapter 8 proposes to introduce a new suite of targets that go beyond those presently agreed under the *Basin Salinity Management Strategy*[16] (BSMS) and existing State arrangements for both salinity and water quality in a way that isn't necessarily reflective of current best practice, or consistent with current national policy.

Many of the targets in the Chapter are set as restrictive upper levels. In some cases, the upper level is within the known existing range of the characteristic, and hence, in reality constitutes a narrowing of the range. Also highly concerning, some ecosystems within the Basin require water quality which is well outside the limits specified in the MDBA's proposed targets under Chapter 8.

For example, many wetlands and waterways in the southern Basin have highly variable salinity levels temporally and spatially, and some listed species and communities require salinity levels well above the values specified in Chapter 8. Some CAMBA and JAMBA species require shallow saline wetlands as critical habitat, which is not likely to be provided for under the targets specified in Chapter 8.

The result is a high risk that if a number of the targets in this Chapter were fully applied in practice, they could lead to local extinctions of some species and ecosystems. The implication of this for an effective Basin Plan appears not to have been considered in any substantial detail by the MDBA.

The MDBA must demonstrate a strong link between the proposed targets outlined in Chapter 8 and the requirement for protection, restoration and provision for the ecological values and ecosystems services of the Basin, as required by the Commonwealth Water Act. Within this, targets must be feasible and cost effective, and contribute to achievement of the environmental objectives.

The MDBA must also amend proposals within the Chapter that currently impose inappropriate water quality targets on specific wetlands which, if applied, would erode the environmental value of these wetlands.

[16] http://www2.mdbc.gov.au/salinity/basin_salinity_management_strategy_20012015.html

2.8 Salt Load is not an Appropriate Measure of Basin Health.

Appropriateness of a Salt Load Target to Measure Basin Health

- A two million tonne salt export target is not an appropriate measure of the effectiveness of the Plan, or overall Basin health.

The proposed new salinity management approach contained in Chapter 8 runs contrary to the historical approach to managing salinity in the southern Murray-Darling Basin under the BSMS. The historical approach has been to manage salinity both for average levels as well as peak salinity, by keeping salt out of the rivers. This has been highly successful, and is now fundamentally embedded with land planning and water trading in Victoria. Subsequently, there is no strong policy justification to move from this approach.

It is unclear how the arrangements under the BSMS are expected to fit with the proposed new approach to managing salinity under Chapter 8 of the proposed Plan, where large salt loads will now be carried through the river system for export through the Murray Mouth. One perverse outcome could potentially be switching off existing Salt Interception Schemes to meet the new salt load target, a highly impractical and ridiculous outcome.

Of major concern to the Victorian Government, on the basis of information provided by the MDBA to date, no strong justification has been made for the appropriateness of using a two million tonne salt export target to measure the effectiveness of the Basin Plan. No strong evidence has been provided by the MDBA regarding what it is intended to achieve, and how important this is to overall Basin health.

Further evidence is required from the Authority as a matter of urgency on the linkage between this target and environmental outcomes across the Basin, especially given the MDBA's own *Hydrologic Modelling Report (page 211)* shows that this target may not be reached under two of the three flow scenarios that were tested.

Clear and detailed information is also required on the practicality, effectiveness and cost of achieving this target.

The salt load export target provided in Chapter 8 is intended by the MDBA to be for the purpose of 'monitoring and evaluating the effectiveness of the Basin Plan' (section 8.17(1)(b)). The target is based on the salt load associated with achieving the BSMS's Morgan target of 800 EC ninety-five per cent of the time (i.e. 1.76 million tonnes per year), with a ten per cent allowance for salt intrusion between Morgan and the barrages.

The BSMS Morgan target is an upper limit on salt concentration in the River Murray with an allowance for exceedence. The management of salt concentrations in water is critical to ensure that the water is suitable for a range of beneficial uses, including environmental uses.

In contrast, load targets can be a very misleading management indicator for protecting the beneficial uses of water. Loads can be very low, even when concentrations of salt are excessively high, if there is very little flow. Conversely, loads can be high; but concentrations very low if flows are very high.

The only practical way that the Basin Plan can increase salt loads is to increase the flow of water. That is, the higher the salt elimination target, the greater the reduction in productive water use that is required.

Until the necessary evidence and information is provided by the Authority, there remains a strong risk that upstream communities are being unnecessarily and further impacted to achieve an undefined and unjustified environmental outcome.

2.9 The MDBA's Proposed Targets Could be Mandatory.

Status of Chapter Eight Targets

- Water quality and salinity targets under Chapter 8 pose legal risks for Victoria in terms of how they may be imposed.

Under Chapter 8, the MDBA provides water quality and salinity objectives and targets for Basin water resources; however the way the MDBA has presented these in the Chapter raises some key legal risks for Victoria in terms of how the targets may be imposed.

To illustrate, page thirty-nine of the MDBA's *Plain English Summary of the proposed Plan* states that the targets in Chapter 8 are 'aspirational'; however this is not reflected explicitly anywhere in the Plan itself. As such, it remains highly uncertain whether these targets are mandatory or aspirational, and the consequences for States and other water users if the targets aren't met, have not been explained by the MDBA in a way that provides any substantial degree of legal certainty.

For example, section 8.08 of the Chapter requires that where the present level of water quality or salinity is better than the target value, then the existing target applies. Section 8.10 then requires that if more than one target applies at a particular site, then the more stringent value is to be used. Mandatory applications of either or both of these sections of Chapter 8 could lead to water resources being allocated to meet a target for which there is no reasonable justification for that action

Beyond these issues, many related elements of the Plan potentially make the Chapter 8 targets more binding than the MDBA may be intending.

For example, Chapter 9 of the Plan requires a State water resource plan to have a Water Quality Management Plan (WQMP; section 9.34). In order for a State plan to be accredited by the Commonwealth Minister for Water, its WQMP ***must*** specify measures that will contribute to the achievement of the objectives in Chapter 8.

In developing measures, States ***must have regard*** to a large majority of the target values in Chapter 8, as well as the causes of water quality degradation that have been identified by the MDBA, which include elevated pathogen counts and elevated levels of pesticides.

For many of these target values and causes of water quality degradation, measures beyond the provision of extra water (e.g. land-based activities), are required. This is acknowledged by the MDBA itself under section 9.37(3) of the proposed Plan, where 'measures may include matters relating to land management'.

Potential for Entitlement to be Used for Dilution Flows

- It is unclear whether the MDBA intends for private entitlements to be called on to meet operational targets related to dilution flows.

It appears that Chapter 8 requires all decision-makers, when making operational decisions, to have regard to certain target values including those for dissolved oxygen, cyanobacteria and algae, and salinity. In terms of complying with these targets, it is not clear from the Chapter if decision-makers in the future may need to use water that is otherwise allocated to the environment or that belongs to consumptive users, in order to comply with these operational targets.

The Chapter also does not clearly specify who the decision-makers in these circumstances are, and whether they are actually enabled to make these decisions.

By comparison, the MDB Agreement currently has clear arrangements for taking water quality into account in making operational decisions, and when water may be taken to be used specifically to manage water quality (i.e. it cannot be done if it impacts on State water shares). The Victorian Government is concerned that such clarity is not currently provided under Chapter 8, including whether proposed new operational 'requirements' are consistent with what is currently specified in the MDB Agreement.

The Victorian Government notes that in accord with the requirements of the Commonwealth Water Act, the Authority is currently reviewing the MDB Agreement for consistency with the Basin Plan. Within this, the Authority must give appropriate consideration in its recommendations to the value of retaining the above mentioned protections currently afforded to all users under existing MDB Agreement arrangements.

Related to this, the MDBA must clarify with absolute certainty whether it intends for private entitlements to be called on to meet these operational targets. If this is the case, then obligations on the Commonwealth to provide compensation to entitlement holders must also be specified.

Given the concerns outlined above, the Victorian Government requests that the MDBA revisit its current version of Chapter 8, and revise as necessary to ensure it does not go beyond the requirements of the Commonwealth Water Act. For example, proposals must not require land management and planning actions to meet targets under this Chapter.

Further, by tying Chapter 8 targets to the identification of measures for the purposes of accrediting State plans under the Commonwealth Act, they appear to be given a formal binding status far beyond their aspirational intent as suggested in the *Plain English Summary*. They also have the potential to directly conflict with Victorian arrangements under the State's *Environment Protection Act 1970*. These arrangements are already consistent with existing national policy, including the *National Water Quality Management Strategy* (NWQMS) and the *Australian and New Zealand Environment and Conservation Council (*ANZECC*) Guidelines*.

2.10 Water Quality Proposals Could Undermine Existing Frameworks.

Practical Integration with Existing Water Quality Frameworks

- The MDBA's proposals under Chapter 8 have the potential to undermine the Victorian Government's existing risk-based approach to water quality management, which has been developed in line with national policies.

Chapter 8 proposes a new suite of targets for water quality, without the MDBA making it clear how the new targets (applicable only to northern Victoria) are to be managed alongside existing statewide targets for the same matters. The lack of clear guidance on how decisions will be made given the extremely high likelihood that actions to meet the range of new and existing targets will conflict, poses a substantial risk to both Basin State Governments and the MDBA.

There is no explicit commitment anywhere in Chapter 8 to align provisions with existing State frameworks, nor are there any administrative arrangements specified in the Chapter that would satisfactorily replace those that already exist. Examples of the threats posed by Chapter 8 to key Victorian frameworks for water quality management are considered in more detail below, using two examples:

- *State Environment Protection Policies* (SEPPs); and
- Victoria's *Safe Drinking Water Act 2003*.

Overall, the MDBA must fundamentally revise this Chapter, to ensure Victoria can maintain the integrity and operation of its existing risk-based approach to water quality management. Related to this, in its revision of Chapter 8, the MDBA must have appropriate regard for the *NWQMS*, and relevant associated *ANZECC Guidelines*, including the risk-based framework that underpins these national policies.

State Environment Protection Policies

The *Environment Protection Act 1970* (Victoria) and associated *State Environment Protection Policies* (SEPPs), both of which are consistent with the *NWQMS*, aim to help achieve sustainable surface and groundwaters across the State by: setting out the environmental values and beneficial uses of water; and setting out goals and means by which those values can be met.

Critically, these arrangements are under-pinned by a framework that sets out a risk-based approach to water quality management that includes clear advice on such factors as: desired attainment and consideration of practicality, including whether requirements are mandatory, or otherwise, and if not what is expected; and roles and responsibilities, across government, industry and communities.

Driving this approach are the principles of cooperation, cost-effectiveness and continuous improvement, where areas of greatest risk are identified and targeted for concerted effort on an 'as needs' basis. This allows for water quality outcomes to be maximised at least cost to community, industry and government.

Essentially what the MDBA has done in preparing Chapter 8 is directly transcribe some of Victoria's existing water quality targets, including those under its *SEPPs*, into the Chapter. This has the effect of potentially making them mandatory, through attempting to apply them outside of the agreed risk management framework within which they have traditionally operated. This approach also has the effect of applying Victoria's existing water quality targets to additional types of waterways, which is inappropriate. For example, the MDBA may be applying targets derived from data from flowing water, to stationary and backwaters.

By failing to recognise the full suite of water quality arrangements in Victoria, the MDBA has effectively placed targets in Chapter Eight applicable to only one half of the State that operators are not likely to be able to meet on a consistent basis. The legal consequences of this remain unclear. In addition, the benefit for water users or the environment of the MDBA's proposed new approach is uncertain.

Safe Drinking Water Act

Similarly to its SEPP approach, and consistent with extant *Australian Drinking Water Guidelines*[17], Victoria's *Safe Drinking Water Act 2003* and associated *Safe Drinking Water Regulations 2005* already provide a comprehensive, risk-based framework, which is based on a catchment-to-tap management approach, which actively safeguards the quality of drinking water throughout Victoria. Underpinned by the strength of these arrangements, the State continues to have high quality drinking water.

Despite the Commonwealth Water Act not requiring targets to be set for drinking water quality in the Basin, section 8.13 of Chapter Eight sets water quality targets for raw water for treatment for human consumption. These targets are centred on algal blooms and salinity.

Whilst it is recognised that algal blooms and salinity do pose significant risks to the quality of drinking water, section 8.13 does not appear to make any allowance for the treatment processes in place, and how these treatment processes will influence the quality of treated drinking water supplied to customers. Additionally, the most significant risks to public health arise from microbiological risks, yet there are no water quality targets for microbiological parameters in section 8.13.

To illustrate, under Victoria's *Safe Drinking Water Act*, Lower Murray Water is required to develop and implement risk management plans for the supply of drinking water to the townships which they manage. These risk management plans help determine the treatment processes that are necessary to provide safe drinking water to Lower Murray Water's customers. This adaptive management approach takes into consideration, raw water quality.

Also concerning, the approach to drinking water quality proposed by the MDBA under Chapter 8 is not consistent with the risk-based approach underpinning the *NWQMS*, or relevant associated *ANZECC Guidelines*. Fundamental to this approach are balanced, cost-benefit based arrangements which the proposed Plan does not allow for.

To illustrate, although the *Australian Drinking Water Quality Guidelines* do make the case that protection of raw water quality is the first barrier to the production of safe drinking water, they do not mandate requirements for raw water quality, recognising that this is an economic trade-off with treatment costs.

[17] http://www.nhmrc.gov.au/guidelines/publications/eh52

Instead, these Guidelines promote the application of risk management, and the installation of appropriate treatment barriers to manage the assessed risk. Informed by this approach, the removal or mitigation of risk is a more appropriate driver for improving raw river water quality, rather than having prescriptive targets, which may or may not be achievable.

Related to the above, the Victorian Government notes that *ANZECC Guidelines* are currently under review. However the MDBA has made no allowance under Chapter Eight for any potential changes in the national approach to water quality management as a result of this review.

It remains unclear why the MDBA has included section 8.13 (Raw Drinking Water Quality Targets) in the proposed Plan, despite it not being required under the Commonwealth Water Act. Neither in the Plan, or in any of the associated documentation does the MDBA make an assessment of the efficacy of existing drinking water regulatory procedures, or the current quality of drinking water across the Basin.

Despite the lack of a clear rationale, the MDBA's imposition of raw water quality targets on one half of the State under Chapter 8 of the Plan, will introduce an additional regulatory burden into Victoria's already well-established and fully comprehensive approach. The consequence of this will be the introduction of additional monitoring and reporting requirements, and potentially confusing accountabilities and responsibilities, to address a need that the MDBA has not identified, and to achieve a set of benefits that the Authority has not defined.

Also highly concerning, the imposition of the MDBA's proposed new targets for water quality and salinity are expected to place significant additional costs upon States, without providing States with any recourse regarding what is imposed. If the MDBA's proposals go ahead unchanged, the Commonwealth must commit to pay any additional State costs that arise as a result of these proposals, in line with its 2008 commitment that States will not bear additional net costs as a consequence of the Basin Plan.

2.11 Water Trade Proposals Don't Align with State Arrangements.

Inconsistencies with the Existing Approach in Victoria

- There are inconsistencies between the trading rules approach proposed in Chapter 11 of the proposed Plan, the Victorian Water Act and existing State policies with regard to trade.
- This cannot be addressed within the timeframes specified by the MDBA under this Chapter of the Plan.

The Victorian Water Act contains quite specific directions in terms of the decisions the Victorian Water Minister can make with respect to approving a trade in certain circumstances. In a number of cases, these requirements under the Victorian Water Act are directly inconsistent with how the Basin Plan will require those same decisions to be made (i.e. the Victorian Act will specify that the trade not be approved, while the Plan will require its approval).

The MDBA has not provided the Victorian Government with any specific information, or formal advice regarding how this issue should be resolved, beyond the general obligation on States and their agents under the Commonwealth Water Act to act consistently with the Basin Plan.

This response is problematic as it does not acknowledge what will be required on behalf of the Victorian Government in order to achieve consistency with Chapter 11. Namely, there will need to be substantive changes to existing Victorian Government policies, Ministerial rules and legislation, and consequent changes to the Victorian Water Register. Even under optimistic estimates, completion of this process would require a minimum of eighteen months, and is subject to the will of the Victorian Parliament.

The Victorian Government considers this matter to remain outstanding. An appropriate transition period will be critical, given the nature of changes required to provide alignment of Victoria's existing trade arrangements with the Basin Plan.

This is currently not provided for under Chapter 11, where the MDBA is currently proposing that sections 11.15 to 11.19 commence on 1 July 2014, with the majority of remaining Chapter provisions commencing even earlier, on 1 July 2013.

Nominating a specific commencement date as opposed to a duration (e.g. xx months from Basin Plan commencement), is impractical, given the outcome of Federal Parliament's consideration of the Plan cannot be predicted ahead of time, and therefore the MDBA cannot yet formally set a commencement date for the Plan.

A more realistic timeframe is needed, in line with the Victorian Government's broad position regarding 2019 commencement of the Plan. Provisions for trade should not commence until 2019, consistent with this general position.

In addition, it is suggested that Chapter 11 should best be viewed as a set of principles to be implemented by Basin States through their own processes and under their own instruments – in Victoria's case, the *Water Act 1989* and related instruments. In the event that a Victorian rule was seen to be inconsistent with the Plan's principles, the MDBA could investigate and even commence compliance proceedings against Victoria. In the meantime, the Victorian rules should apply and be effective.

Beyond this, the costs associated with the MDBA's proposals under Chapter 11 are expected to be significant. To date, the MDBA has been silent on how these costs will be allocated and who will ultimately have to pay for these changes. The Victorian Government contends that ultimately this is a cost that should be borne by the Commonwealth, given the Basin Plan is a Commonwealth Government policy reform. The Victorian Government requests urgent advice from the MDBA regarding cost allocation as it relates to this matter. Issues with the cost impact anticipated as a result of the Basin Plan more generally, are discussed further on in this submission.

Additional high-level issues related to Chapter 11 are discussed in more detail below. More detailed comments on Chapter content, including discussion of key problematic clauses, can be found at Appendix D.

2.12 Trade Restrictions Could be Challenged.

Concerns with Provisions Related to Trade Restrictions

- Trading restrictions made by States under Chapter 11 could be subject to legal challenge.

Sections 11.15 to 11.19 of Chapter 11 provide additional rules relating to surface water, for restrictions on trade of tradeable water rights. The Victorian Government notes that the wording of these sections has been the subject of much discussion between Basin officials and the MDBA, and concedes that they allow trading restrictions to be made promptly and clearly when required.

However, the Victorian Government remains highly concerned about the degree to which trading restrictions made by States under these sections of Chapter 11 could subsequently be subject to legal challenge. The MDBA's proposal lacks sufficient certainty, given the potential for actions to be taken by parties who are unhappy with a trading restriction, which would lead to market uncertainty. The Victorian Government's contention is that governments, not courts, should decide on trading restrictions.

The MDBA must give further, urgent thought to this matter in order to improve the legal certainty around mechanisms associated with the setting of trade restrictions.

There are a number of possible approaches that should be investigated, such as making a restriction effective if the State announces that in its reasonable opinion, it is necessary under section 11.17, and then either:

- allowing the MDBA (at its option) to review whether the State's opinion as to necessity was reasonable, and, if the MDBA advises the State's action was unreasonable, require the State to remove the restriction as soon as possible; or
- placing the onus on any litigant to prove that the State's opinion as to necessity was not reasonable, and making an MDBA declaration under section 11.19 a defence against a person claiming a contravention.

2.13 Provisions for Groundwater Trade are Impractical.

Concerns with Provisions Related to Groundwater

- The MDBA's proposals for groundwater trade are highly prescriptive, and do not allow for rules to be updated as experience grows.

In relation to groundwater, under Subdivision C (sections 11.23 – 11.25) of Chapter 11, the MDBA outlines rules relating to groundwater trade. Under this Subdivision, the MDBA is proposing to:

- prohibit trade between SDL resource units, unless there is sufficient hydraulic connectivity between the two locations; and
- require that a traded groundwater licence must carry its old conditions with it into the SDL unit it is traded into.

The Victorian Government contends that these are not sensible approaches in all cases of groundwater trade. These rules do not provide for flexibility, should different arrangements be more suitable or practical with regard to a particular trade, or desirable for management reasons in the future. This applies to trade within groundwater SDL resource units, between groundwater SDL resource units, and between surface and groundwater SDL resource units.

For example, there may be circumstances where, for appropriate management purposes, it is considered desirable to shift licensed use from one aquifer system to another, such as from a shallow alluvium aquifer to a deep aquifer. This would be prohibited under the proposed Plan.

Further, it is not sensible to require the specific conditions applying to one groundwater licence to be carried forward into the conditions on another licence if the groundwater is traded. Licence conditions pertain to the location in which the water is used and should not be carried over from the location from which the water was traded.

Also concerning, Part 8 of Chapter 9 of the proposed Plan requires that State water resource plans include specific rules for the conduct of groundwater trade within groundwater SDL units, between groundwater SDL units, and between groundwater and surface water SDL units. The Victorian Government considers this to be a highly impractical approach as it does not allow for these rules to be changed as knowledge and experience of groundwater trade grows.

2.14 Proposals do not Account for Trade Between Valleys.

Accounting for Trade

- The proposed Plan does not appear to include a mechanism to account for trade between valleys.
- This is an issue that will affect compliance with SDLs.

The proposed Plan does not appear to include a mechanism to account for trade between valleys. This creates compliance issues going forward for both tagged trade and allocation trade.

The proposed Plan doesn't enable adjustments at the end of a year for trades (entitlement or allocation) between productive users in different SDL resource units. For example, the Goulburn BDL and in turn, the SDL permits the use in the **Goulburn** of the water that has traded out of the Goulburn - but the water will be recorded as being used in the Murray and so the Murray SDL could be exceeded when Victoria is acting appropriately.

While section 9.17 says that a State water resource plan must account for trade, it does not seem to amend the requirement that 'take' must comply with the SDL. Additionally, State water resource plans may not be a good place to do trade adjustments. That would require all water resource plans to be consistent with each other at all times, and that is hard to guarantee. Perhaps the intent is covered, but the implementation mechanism is not clear.

The preferred trade adjustment mechanism is to reduce the annual permitted 'take' in the valley of origin and increase it in the valley of destination, as currently occurs for cap accounting This is an issue that needs to be resolved, as it will affect compliance with SDLs.

Section 3 - Implementation Issues Pose Legal Risks and High Costs

3.1 Introduction.

The Feasibility of Implementing the proposed Basin Plan is Uncertain

- The *proposed Basin Plan* does not fit together in a sensible, or workable way, and it is not clear how the Plan will be operationalised in practice. In particular, roles and responsibilities associated with implementing the Plan are not clear.
- As a result, implementation risks, including the lack of clarity regarding legal obligations, and costs associated with the Plan will potentially be extremely high.
- Once it becomes law, the Basin Plan will be a centralised, command and control regime imposed from Canberra, leading to a situation where decisions are made by the Authority, but costs are carried by the States.

It is not clear that the Authority fully understands how the various Chapters of its proposed Plan fit together and how they will collectively work in practice; particularly with regard to implementation through diverse State water planning arrangements, and operational requirements to deliver what's being proposed.

As a result of these substantial gaps and uncertainties, the implementation risks and costs associated with the Plan have the potential to be extremely high. In addition, the lack of clarity regarding legal obligations under the Plan poses a substantial threat, especially if key sources of uncertainty aren't resolved before the Plan becomes a formal and enforceable legislative instrument.

Once it becomes law, the Murray-Darling Basin Plan will be a centralised, command and control regime imposed from Canberra, leading to a situation where decisions are made by the Authority, but costs are carried by the States.

The next section of this submission outline in more detail, the key transition and implementation issues the Victorian Government has identified in its analysis of the *proposed Basin Plan* and associated documentation. These include:

- a more detailed consideration of the issues associated with Basin Plan implementation arrangements under Chapter 9 of the Plan and reporting requirements under Chapter 12, and likely associated risks and impacts;
- a discussion of the high-level legal risks associated with the Plan, including those likely to arise if transitional arrangements are not properly clarified; and
- consideration of the transition policy needs for the Basin arising from the Plan.

Suggestions for a proposed way forward are provided in a concluding statement at the end of this section.

3.2 Water Resource Plan (WRP) Requirements are Impractical.

The Feasibility of Implementing Water Resource Plan Requirements is Uncertain

- The proposed Plan hands problems to State Governments and local communities to solve, without the structures and the funding to fix them.

Under the Water Act 2007, Basin State Governments will have no power to directly control the Basin Plan, yet the Commonwealth Water Act will require the States and Commonwealth to put the Plan into action, and generally prohibits them from acting inconsistently with it.

The Basin Plan will become law, and the Victorian Government considers it critical that roles, responsibilities, accountabilities, rights and legal obligations be clarified in the final Plan. As it now stands, the proposed Plan hands the problems to State Governments and local communities to solve, without the structures and the funding to fix them.

To illustrate, the Victorian Government is highly concerned about the onerous requirements within Chapter 9, and the likely uncertainty that will arise when the MDBA attempts to accredit State water resource plans under the Commonwealth Water Act. This uncertainty is due to a lack of clarity under Chapter 9 regarding what State actions will satisfy MDBA expectations that a water resource plan should be accredited.

The Victorian Government questions the wisdom of explicitly documenting complex water planning requirements in a legal instrument that has little prospect of easy amendment. This is counter-intuitive to the MDBA's support for an adaptive approach through the Basin Plan. The Victorian Government strongly recommends that the MDBA move onerous requirements under Chapter 9 to guidelines, which can be adapted with further experience and knowledge.

Under the requirements of Chapter 9, States will draft water resource plans (WRPs). Once these have been accredited by the Commonwealth Minister for Water, on the advice of the MDBA, they will give effect to key elements of the Basin Plan.

There remains a strong likelihood that there will need to be significant amendments made to Victorian legislation to enable the Victorian Government to give effect to the water resource planning approach that has been put forward by the MDBA under Chapter 9 of the *proposed Basin Plan*. Beyond this, Chapter 9 contains aspects that go further than the Commonwealth Act requires, including Part 13, that imposes obligations for managing extreme events.

Key issues associated with Chapter 9 are discussed below. More detailed comments on Chapter content, including discussion of key problematic clauses, can be found at Appendix E.

In addition to these concerns, the Victorian Government notes that the MDBA is currently proposing that Chapter 9 come into operation when the Plan is made. Pending Federal Parliamentary approval of the Plan, this is expected to occur in late 2012 or early 2013. Once formally recognised, Victoria's transitional water resource plans (TWRPs) and interim water resource plans (IWRPs) are expected to operate as the State's complete water resource plans until 2019. A number of issues remain with finalisation of Victoria's TWRPs and IWRPs, which are discussed further on in this submission, where broader Basin Plan transition risks are considered in more detail.

3.3 WRP Proposals don't Align with State Statutory Arrangements.

Inconsistencies Between the Basin Plan and Victoria's Water Management Framework

- The Commonwealth Water Act and the proposed Basin Plan do not directly align with the Victorian Government's legislative framework for water management.
- As a result, Victoria's approach to water planning and management is inconsistent with that of the MDBA and the Commonwealth.
- This threatens to undermine the security and reliability of Victorian water entitlements, and could require costly legislative amendments for no obvious benefit.

The Victorian Water Act sets out an entitlement framework under which rights to take water, akin to (though not amounting to) property rights are defined and protected. The only way entitlements can be changed is through clear, statutory processes under the Victorian Act.

In contrast, the arrangements under the Commonwealth Water Act impose the concept of a 'water resource plan' (WRP), which encompasses both an entitlement framework and the means by which entitlements can be adjusted by government in a directive manner. This approach directly contradicts arrangements in Victoria, where entitlement security fundamentally underpins investment in irrigated agriculture across the State.

Stemming from this difference in approach, the Victorian Water Act does not currently recognise the concept of a WRP or its equivalent. Therefore, the Victorian Government cannot prepare a WRP as it is defined in the Commonwealth Water Act, and costly amendments to the State's water legislation would be required to give effect to this aspect of the Basin Plan.

The Victorian Government has raised these issues with the MDBA, numerous times during the drafting of Chapter 9. To date, the Authority has not provided any certainty regarding the legal, practical and conceptual challenges of adopting its WRP approach within Victoria. As such, the Victorian Government cannot currently assess the likely administrative and cost impacts, this new layer of regulation will present for the Government, its water agencies and users.

The basic intent of Chapter 9 is to implement key provisions of the Basin Plan through the preparation of State WRPs. As a result, the final content of Chapter 9 should ultimately be informed by the resolution of policy matters that the Victorian Government still considers to remain outstanding within other Basin Plan Chapters, namely: SDLs for surface and groundwater; environmental watering arrangements; and water quality and salinity.

Simpler options must be considered by the MDBA as a matter of urgency, to ensure that major legislative amendments are not required and the integrity of Victoria's well regarded water management framework is maintained. Such options could include a suite of existing instruments under the State's current framework being accredited as WRPs under section 63 of the Commonwealth Water Act.

This would allow Victoria to comply with Basin Plan requirements in a way that doesn't threaten to undermine the security and reliability of the State's water entitlements, or require major legislative amendments with no obvious benefit in terms of improved water management practices within the State.

Without resolution of the matters outlined above, the Victorian Government is unable to comprehensively assess the full range of likely implementation issues and associated costs that would result from this Chapter.

3.4 Recognition of Indigenous Values and Uses.

Recognition of Indigenous Values and Uses within WRP Requirements

- The MDBA has provided very little detail regarding how Indigenous values and uses have been considered at the Basin-wide scale.

Under Part 14 of Chapter 9, the MDBA has prescribed a series of highly specific objectives, outcomes and consultation requirements in relation to Indigenous peoples, with particular reference to the need to 'have regard' to matters related to cultural flows. The inclusion of this Part within Chapter 9 goes beyond what is required under the Commonwealth Water Act in terms of mandatory content for this Chapter.

The Authority has provided no strong justification for why it wishes to have Indigenous values and uses addressed in this way within State WRPs, and has included very little direction within the proposed Plan regarding how this should be done.

The National Water Initiative commits the Commonwealth and Basin States to improve the involvement of Aboriginal people in water resource management. It is not clear in the *proposed Basin Plan* how it has been prepared 'having regard to the views of Indigenous people with respect to cultural flows' (a requirement for State WRPs under section 9.58); nor have Indigenous values and use objectives been incorporated into any Commonwealth decision-making processes in relation to the flow needs across the Basin (a requirement for State WRPs under section 9.56).

To illustrate, the Murray and Lower Darling Rivers Indigenous Network (MLDRIN), and the Northern Murray-Darling Basin Aboriginal Authority (NBAN), who represent 43 Traditional Owner Groups across the Basin, developed a definition of cultural flows. This definition indicates that a 'cultural flow' ought to be available to meet and advance economic needs, and is clearly distinguishable as a flow regime separate from environmental flows. While this definition is reproduced in the MDBA's Indigenous engagement companion document *A Yarn on the River*, it has not been reflected within the proposed Plan itself.

More broadly, the Victorian Government is concerned that the requirements under Part 14 of Chapter 9 may limit existing consultation approaches that have already been committed to. For example, through Sustainable Water Strategies, Victorian Traditional Owners have indicated that they are interested in economic values and uses of water as part of their cultural interest. The Basin Plan currently requires a more narrow definition of matters that Indigenous people regard as part of their cultural interest (e.g. traditional social, spiritual and cultural values, under section 9.56).

If the MDBA's intention is to include Part 14 as a formal requirement for State WRPs, it must provide more detailed information regarding how Indigenous values and uses have been considered at the Basin-wide scale, and confirm that proposed arrangements under the Plan will not undermine existing State-based consultation processes.

3.5 Monitoring and Reporting Requirements will have a High Cost Impact.

The MDBA's Proposals Could Lead to Onerous, Unnecessary and Constant Reporting

- Under Chapter 12 of the proposed Plan, the potential for onerous, unnecessary and constant reporting is a significant concern for the Victorian Government.

Chapter 12 of the *proposed Basin Plan* sets out requirements for monitoring and evaluating the effectiveness of the Basin Plan, including obligations on States and other parties within the Basin such as the CEWH and other relevant Commonwealth Departments and agencies.

Under the current version of Chapter 12, the potential for onerous, unnecessary and constant reporting is a significant concern for the Victorian Government. The reasons for these reporting requirements need clearer explanation.

Similarly to Chapter 9, the content of Chapter 12 is counterintuitive to what is needed under an adaptive approach, and the arrangements don't logically provide for a clear assessment of Basin Plan effectiveness in a way that is streamlined and cost-efficient. As a result, the legal and cost obligations that States are likely to face under this Chapter are extremely unclear.

To illustrate, the overall monitoring framework proposed under Chapter 12 is difficult to follow, poorly explained and not clearly justified, particularly given the highly onerous reporting requirements it places upon States. Also concerning, the Chapter provides no clear links between the Basin Plan objectives, as identified under Chapter 5, and the MDBA's proposed outcomes for the monitoring framework itself, which are defined in Schedule 10 of Chapter 12.

Related to this, the proposed reporting cycles under Chapter 12 are poorly articulated, duplicative and do not appear to have been aligned with reporting requirements that exist elsewhere within the Plan, for example in relation to Chapters 7, 8 and 9.

The Victorian Government recommends that Chapter 12 be revised to ensure that the MDBA's monitoring framework sets out arrangements that:

- clearly align with policy and reporting requirements under other Basin Plan Chapters;
- align with Basin Plan objectives, as stated in the final version of Chapter 5;
- clearly articulate State obligations under Basin Plan outcomes, objectives and targets; and
- are underpinned by an adaptive approach that is flexible and cost-efficient.

3.6 The Consequences of Non-Compliance are Unclear.

Failure to Comply with the Basin Plan could have Significant Consequences[18]

- The Basin Plan is a binding and legally enforceable document.
- Failure to comply with the Plan could potentially have significant consequences.
- The MDBA must clearly explain the full suite of legal obligations that it expects will arise under the Basin Plan, especially with regard to the likely consequences of non-compliance.

The outstanding policy issues and uncertainties raised throughout this submission are exacerbated by the fact that the Basin Plan is a legislative instrument. As such, it is a binding and legally enforceable document.

Giving effect to this, there is a general duty set out in section 35 of the Commonwealth Water Act, that applies to all agencies of Basin States (i.e. including Ministers, Departments, Statutory Authorities and certain persons), involved in managing or operating water infrastructure in the Basin. That duty requires all relevant persons to act consistently with the Basin Plan. The duty is two-fold: an action must not be taken where it will be inconsistent with the Plan; and the option of not taking an action must not be chosen if doing so would be inconsistent with the Plan.

Although not yet formally tested, failure to comply with this broad statutory duty could potentially have significant consequences, as there is currently no legal certainty as to how inconsistencies will be determined and resolved. Decisions could be challenged by third parties on the basis that the Basin Plan was not applied properly by decision-makers in exercising their discretions under State legislation. This could arise because uncertainty around the detail of proper implementation of the Basin Plan makes it hard for States to know how to properly and validly apply the Plan in making decisions.

The Victorian Government is still working to understand the full implications of these risks, in particular, the interaction of the Plan with existing State laws. The Victorian Government strongly recommends that the MDBA clearly explain the full suite of legal obligations that it expects will arise under the Basin Plan, especially with regard to the likely consequences of non-compliance.

[18] This discussion is intended to highlight the policy issues associated with these aspects of the Basin Plan and Commonwealth Water Act. It does not constitute formal legal advice on these matters.

3.7 The Intent of 'Have Regard To' is Uncertain.

The MDBA has used 'Have Regard To' Inconsistently Throughout the Plan

- The MDBA has used the requirement 'have regard to' inconsistently within the Plan. This creates uncertainties regarding obligations associated with the use of this term.
- As a result, States face potential risks regarding non-compliance with the Basin Plan.

Throughout the *proposed Basin Plan* the MDBA requires States and other agents to 'have regard to' various matters. In discussions between Victorian and MDBA officials around Basin Plan content, this term appears to have been applied with different intent across key Chapters.

To illustrate, section 7.42 contains a principle which requires environmental watering to be undertaken 'having regard to' the Basin annual watering priorities. The Victorian Government understands that this principle is intended to guide the use of Commonwealth-held environmental water within the Basin. This is currently the only provision within Chapter 7 that addresses this matter specifically and it is not clear whether the use of 'having regard to' under section 7.42 will be used as a high or low test by the MDBA.

In addition, as noted previously in this submission, section 8.11 of the proposed Plan requires a range of parties, including agencies of Basin States, to 'have regard to' a series of water quality targets when making operational decisions. The Victorian Government understands that MDBA officials consider this to be a low test as targets under Chapter 8 are intended to be aspirational; however this has not been reflected explicitly anywhere in the Plan itself.

Finally, through the current version of Chapter 9, the MDBA requires States to 'have regard to' or consider various matters as WRPs are prepared. Key examples of where this occurs are provided at Appendix E. The Authority has not yet explained its expectation of State obligations with regard to these requirements, and has given no conclusive indication of whether this will be a high test.

The law suggests that the use of 'have regard to' would be a high test; however, to a certain extent, the degree of regard that must be had, is largely a question for the Courts. For example, it could be possible for a third party to take legal action against a State for review of a decision on the basis that regard was not had to relevant considerations in the decision-making process.

This places States at substantial risk. The use of 'have regard to' within the proposed Plan must be amended to provide States with greater legal certainty.

3.8 Victoria must be Exempted from the Basin Plan Until 2019.

Victoria's Transitional Water Plans must be Finalised as a Matter of Urgency

- No aspect of the Basin Plan should commence in Victoria before 2019.
- To give effect to this, Victoria's transitional water resource plans (TWRPs) and interim water resource plans (IWRPs) are expected to operate as the State's water resource plans until 2019.
- The Victorian Government is close to finalising, with the Commonwealth, its TWRPs arrangements; however formal discussions around Victoria's IWRPs have not yet commenced with the MDBA.

The Victorian Government maintains its position that for certainty and ease of transition, the full Basin Plan should commence in all jurisdictions from 2019. At a minimum, no aspect of the Plan should commence in Victoria before this time. A transition time of this length is considered necessary, given the complexity and lack of clarity within the proposed Plan regarding its commencement and implementation.

To illustrate, section 1.04 of the proposed Plan outlines the commencement dates for various Chapters of the Plan. Section 1.04(1) specifies that all Chapters of the Plan, apart from Chapter 11, will commence on the day after the Basin Plan is registered. The majority of Chapter 11 will commence on 1 July 2013, with remaining provisions under the Chapter commencing on 1 July 2014.

To give effect to the 2019 start date for SDLs, section 9.13 of Chapter 9 requires SDLs to be quantified under State WRPs from 1 July 2019. Issues associated with this approach were outlined earlier in this submission. The remainder of Chapter 9 will commence on the day after the Basin Plan is registered.

As noted earlier, once formally recognised, Victoria's transitional water resource plans (TWRPs) and interim water resource plans (IWRPs) are expected to operate as the State's water resource plans until 2019. In order for this to occur:

- the Commonwealth must ensure the making of a regulation listing Victoria's TWRPs, for inclusion in the Commonwealth Water Act, before the Basin Plan first takes effect; and
- agreement must be reached with the MDBA to formally recognise Victoria's IWRPs, including that they remain in place until Basin Plan commencement in 2019.

Related to the above, there are a number of provisions within the proposed Plan that will require the Victorian Government and its agencies to undertake additional actions, over and above what is currently provided for under existing State-based instruments. It is currently unclear whether these actions will come into effect immediately (i.e. when the Basin Plan first commences), or whether the intention is for Victoria's TWRPs and IWRPs to prevail as the full suite of State water management activities in the Basin through to 2019.

Neither the Commonwealth nor the MDBA has provided the Victorian Government with any clear guidance in this regard. The Victorian Government's preference, as stated above, is that no aspect of the Plan should commence within the State before 2019, including any additional activities that may arise through Basin Plan provisions that go beyond existing State-based arrangements.

More broadly, to ensure ease of transition for all Basin jurisdictions and their communities, a commencement timetable is needed that provides a rational 'phasing-in' of the Basin Plan, and key associated elements (e.g. 'Bridging the Gap'). This must be underpinned by appropriate transition arrangements. Suggestions for doing this are provided at the end of this submission.

3.9 Implementation of the Basin Plan will have a High Cost Impact.

The MDBA has not Given Due Consideration to the Cost Impact of the Basin Plan

- The Basin Plan, as proposed by the MDBA, is not consistent with COAG's principle of least cost regulation; and will impose additional costs on Basin States and water users through an increased regulatory burden. The MDBA has neither quantified nor justified these costs.
- This creates an untenable situation where, under the Plan, decisions will be made by the Authority, but costs are carried by the States.

As noted previously in this submission, under the Water Act 2007, Basin State Governments will have no power to directly control the Basin Plan, yet the Commonwealth Water Act will require the States and Commonwealth to put it into action. This creates an untenable situation where, under the Plan, decisions will be made by the Authority, but costs are carried by the States.

The likely implications of this situation are made worse given that, in finalising the *proposed Basin Plan*, the MDBA appears to have not given due consideration to the cost implications that will result from the level of prescription it is seeking to impose. It is also arguable in many cases whether much of this prescription is actually required by the Commonwealth Water Act, and from a functionality perspective, whether it is really suited to a legislative instrument.

As a result, implementation of the Basin Plan legislative instrument, as currently envisaged by the Authority, is likely to impose not just additional, but also unnecessary costs on State Governments and possibly water users, through an increased regulatory burden on water and natural resource management agencies. These costs have not been adequately quantified, let alone justified by the MDBA.

An object of the Commonwealth Water Act (section 3(g)), is to 'achieve efficient and cost effective water management and administrative practices in relation to Basin water resources'. Duplicating or over-regulating pre-existing and in most cases, well functioning State and intergovernmental arrangements will not achieve this outcome.

The Victorian Government believes that the underlying cause of this potentially significant administrative burden is that the proposed Plan does not clearly define nor assign roles and responsibilities, creating potential legal confusion as to where and with whom enforceable obligations ultimately rest. The current approach could see the Authority become heavily involved in aspects of Basin water management where arrangements are already in place, potentially leading to legal uncertainty and regulatory duplications.

From a State perspective, the final Basin Plan will impose an additional, untested, legally enforceable administrative layer that will be both time and resource intensive, without any apparent benefits.

COAG has been actively promoting policy reform around cost effective regulation since 1994. In October 2007, it released its *Council of Australian Governments Best Practice Regulation - A Guide for Ministerial Councils and National Standard Setting Bodies*[19]. It would appear that the heavy handed regulatory approach of the MDBA in the proposed Plan is inconsistent with this objective.

To that end, the Victorian Government looks forward to playing a constructive role in the Authority's forthcoming *Regulatory Impact Statement (RIS)* process to better understand the resourcing implications of implementing the proposed Basin Plan.

The Commonwealth Must Enhance its 2008 Commitment Around 'No Net Costs'

- The Commonwealth Government must extend its 2008 commitment that States will not bear additional net costs as a consequence of the Basin Plan, beyond 2015.
- Where States and communities are required to undertake extra activities as a result of the Plan, the Commonwealth must contribute financially to their cost.

The rebalancing implicit in the Basin Plan (a substantial shift to the centralised management of the Basin at the Commonwealth level) will impose a significant implementation cost across the Basin; one that will likely be unevenly distributed and as a consequence, one that demands a significant financial contribution from the Commonwealth to offset this cost impact.

In addition, the scope of adjustment needed to address broader impacts associated with implementation of the Plan, and assist communities' transition to a water constrained future is likely to require facilitation through direct Commonwealth Government intervention in addition to investments in improved infrastructure and water buybacks. This is discussed in more detail in the next section of this submission.

Regardless of whether the Authority adopts least cost regulation as a guiding principle for the Basin Plan, the Victorian Government considers it a Commonwealth responsibility to play an important complementary role in supporting the Authority to develop a fair and equitable method of supporting a transition for Basin States and communities, to what is likely to be a 'higher cost' Basin water management framework from 2019.

Previously, the Commonwealth has committed to pay for any additional costs imposed on Basin jurisdictions from Basin Plan implementation until 2015. This was based on an assumption that the Basin Plan would commence in 2011.

As a first step, the Victorian Government sees it as essential that the Commonwealth re-commit to the undertaking in Part 5 of the July 2008 *Agreement on Murray-Darling Basin Reform*[20], that Basin States will not bear additional net costs as a consequence of the reforms agreed between the parties and implementation of the Commonwealth Water Act. The Commonwealth should further enhance this commitment by formally giving extended effect to this undertaking beyond 2015.

[19] http://www.finance.gov.au/obpr/docs/COAG_best_practice_guide_2007.pdf
[20] http://www.coag.gov.au/coag_meeting_outcomes/2008-07-03/docs/Murray_Darling_IGA.pdf

Key examples of where increased costs can be expected, have been provided throughout this submission. By way of a more comprehensive summary, key cost increases can be expected in the following areas:

- water resource planning, accreditation and auditing;
- environmental water planning;
- operations and maintenance for additional infrastructure;
- data gathering, assessment and reporting;
- environmental, social and economic monitoring;
- science and knowledge generation;
- Basin governance and inter-jurisdictional engagement;
- transition support; and
- community engagement and education.

In addition, the Victorian Government sees a strong case to justify Commonwealth transitional support to assist timely uptake of more rigorous water planning and management requirements mandated by the Basin Plan. To that end, the Commonwealth should consider adopting a principle that, where Basin States and communities are required to undertake extra activities or implement enhanced functionality, then the Commonwealth will contribute to the cost of transitioning to these new arrangements.

The Commonwealth has actively promoted an intent through the Authority to have Basin water planning and management arrangements brought up to a much improved common standard upon commencement of the Basin Plan in 2019. In the Victorian Government's view, the Commonwealth is then obliged on its own precedents in promoting national water reform to invest to ensure that this step change is made. Compelling precedents to recall in this regard are the Commonwealth's significant investments in creating a National Water Market System and a National Compliance and Enforcement Framework.

Alternatively, the MDBA must incorporate a clearly prescribed process into the Basin Plan itself, where States are involved in decision-making around new activities and associated cost implications. This would be based on the principle of least-cost regulatory burden.

3.10 A Transition Policy for the Basin Plan is Needed.

Developing a Transition Policy for the Murray-Darling Basin

- The Commonwealth's focus to date on Basin Plan structural adjustment needs has been too narrowly focussed on farmers and water purchases.
- The Commonwealth must recognise the broader impact of the Plan, beyond the farm gate, and provide a well articulated structural adjustment program with targeted assistance.

The MDBA 's Basin Plan represents a major reform agenda, requiring significant behavioural change within irrigated agriculture. Despite this, the Commonwealth has to date only focussed on transition support for farmers through the upgrade of infrastructure or purchase of water entitlements. Whilst this focus is necessary, it is too narrow if the Commonwealth wants to contribute to the effective transition of businesses and communities to a lower water future.

Compounding this, uncertainty surrounding implementation mechanisms, such as Commonwealth water needs and water purchase, makes it particularly difficult for irrigators, industry, businesses and communities to plan for the future.

Research commissioned by the MDBA itself[21], together with the Victorian Government's previous experience in structural adjustment, suggests sensitivity to changes in water availability increase comparatively with higher levels of resource dependency, increased economic stress, heightened social stress, an ageing rural workforce and a relatively low or concentrated skill base.

While buy-backs could play a role in facilitating economic restructuring, the extent of adjustment required, the impediments to change that exist, and relatively low level of adaptive capacity in many communities, will demand a clearly articulated transition policy, supported by targeted assistance. This makes the case for a stronger commitment by the Commonwealth to adjustment beyond water purchase.

The Victorian Government considers that the Commonwealth has not enunciated a clear structural adjustment plan for these affected groups. So far, the focus seems to have been on supporting transition by agricultural producers, but a broader focus is required. Having a clear structural adjustment plan for all affected parties is important to garnering support for the Basin Plan as a whole.

The above discussion also highlights that the MDBA and the Commonwealth can choose to take steps now, in relation to the content and approach of the final Basin Plan, that will reduce socio-economic impacts and hence, the need for broader transition assistance.

[21] EBC, RMCG, Marsden Jacob Associates, EconSearch, McLeod, G, Cummins, T, Roth, G and Cornish, D., *Community Impacts of the Guide to the Proposed Murray-Darling Basin Plan*, Murray-Darling Basin Authority, Canberra, May 2011, especially Volume 3: Community Impacts, pp. 1-14.

Key examples were provided earlier in this submission, where the priority for any additional environmental water should be from infrastructure and on-farm programs, ahead of purchase. Environmental works and measures should then be undertaken to ensure efficient use of environmental water, thus reducing the volume of water that needs to be taken from productive use.

Overarching Principles

In its submission to the MDBA's October 2010 *Guide to the Proposed Basin Plan* (the Guide), the Victorian Government identified some broad principles for Governments providing transitional assistance to address impacts arising from implementation of the Basin Plan. In summary, these principles included:

- Assistance should focus on increasing the efficient use of resources, by facilitating adjustment to its most efficient use. Adjustment assistance should not impede the adjustment of capital, water and labour to its most efficient use.
- Governments should avoid picking winners and/or subsidising unsustainable industries – such actions will ultimately result in barriers to efficient adjustment in the Basin.
- Policies and programs should be location specific, targeted to the particular needs of the region, and be flexible to changing circumstances.
- New assistance programs should complement and not overlap those already in place.
- Early action, and the announcement and phasing-in and out of structural adjustment assistance can smooth natural adjustment processes and reduce the overall need for assistance.
- The government responsible for a policy change that leads to transition pressures should assume primary responsibility for any adjustment support.

It should be recognised that the Basin Plan is a Commonwealth Government reform. As such, the Commonwealth has primary responsibility for funding any additional transition policies and programs needed as a result of the Plan. However, other levels of Government have a crucial role to play in the design and implementation of programs and policies at the regional and local level.

Basin State Governments are likely to have the most appropriate administrative capacity, expertise and established regional networks to design and implement location specific adjustment measures.

Regional communities and local government/regional development organisations should be consulted in the design and development of location specific adjustment support programs. They will have detailed information on the nature of the adjustment likely to be experienced within the region, and the likelihood of success of different programs.

Appendix F provides some examples of the role of Government in assisting structural adjustment.

Suggestions for an Improved Transition Approach

Beyond greater certainty, what is required to facilitate transition is a combination of improved infrastructure, water purchase and targeted assistance. The Commonwealth must turn its attention to other structural adjustment issues including:

- Assisting farmers to transfer their skills to other farming methods (e.g. dryland) or other industries through training opportunities and skills recognition.
- Assisting those in food processing and local service industries to adjust to the new economic landscape. They will require information on education and training opportunities, financial management, and employment prospects in other industries.
- Diversification of local economies away from irrigated farming towards other industries in which the region may have a competitive advantage.

If the Commonwealth continues to ignore these issues, public uncertainty about the Plan's impacts will grow and support dwindle. The Commonwealth will be seen as forcing change upon communities and individuals, without providing adequate support to adjust to that change.

4 Suggestions for a Way Forward.

Any Solution Around a Proposed Way Forward Must Provide Certainty

- The Victorian Government does not support the proposed Plan in its current form.
- The SDLs in the 2012 version of the Plan to be considered by Federal Parliament, must be fixed, providing certainty to water users in the Basin.
- SDLs must be set in a way that ensures environmental outcomes are balanced and achieved efficiently, within system delivery constraints.
- All elements of the Plan must be feasible, and with benefits rationalised and clear roles, requirements and legal obligations.
- All onerous prescription under the Plan, that directly blocks the implementation of an adaptive approach, must be moved to guidelines and negotiated with jurisdictions, based on the principle of least-cost regulatory burden.

What the Victorian Government's submission on the MDBA's *proposed Basin Plan* has highlighted is that the Plan in its current form is expected to have adverse impacts on the State's communities and industries. Of greatest concern is that many of these impacts stem solely from the approach that the MDBA has adopted in its drafting of the Plan. The Victorian Government does not support the proposed Plan in its current form.

The Victorian Government believes that the MDBA's proposed reduction in surface water use of 2,750 GL is too high, as the Authority has failed to properly take into account, system delivery constraints within the Basin, and has not fully explored all options available for achieving environmental benefits with less water. As a result, 2,750 GL is not a reasonable balance between the volume of water needed to achieve environmental outcomes, and the impact on regional communities from taking water out of productive use.

Proposed SDLs for groundwater, that reduce entitlement for key aquifers in Victoria, are not supported by the technical work undertaken, and are overly conservative. As a result, the MDBA's proposed reductions in groundwater use within key Victorian aquifers also do not represent a reasonable balance.

In addition, the uncertainties that stem from the MDBA's proposals to assign 'shared downstream needs reduction' amounts to the northern and southern Basin, and review SDLs in 2015, create unacceptable levels of uncertainty for Victoria's industries and communities. The SDLs that are included in the 2012 version of the Basin Plan, to be considered by Federal Parliament, must be fixed. This means the 'shared downstream needs reduction' should be apportioned, and the 2015 Review should be removed from the Plan.

Further water returned for the needs of downstream systems must be fully considered and justified, with the priority for any additional water to come from infrastructure and on-farm programs, ahead of purchase. Further, environmental works and measures projects and options for smarter systems management and operations should be undertaken to enable environmental water to be used more efficiently, thus reducing the volume that needs to be taken from productive use.

More broadly, the Victorian Government considers that the Chapters of the Plan related to environmental watering, water quality and salinity, and water resource plans and reporting requirements are too prescriptive in their current form. This is likely to directly impede the adaptive management approach that the Authority has been using as a key selling point for its Plan. The Victorian Government reasserts its position that all onerous prescription under the Plan, that directly blocks the implementation of an adaptive approach, be moved to guidelines which can then be easily amended based on future experience and knowledge.

Underpinning all of this, is the effect that uncertainty has on the ability for communities, businesses and industries to adapt to a future with less water, and for Basin State Governments to prepare for implementation of the final Basin Plan. First and foremost, any solution around a proposed way forward must provide certainty.

Suggestions for a Way Forward

The Victorian Government has given some consideration to the parameters of a proposed way forward that would provide the level of certainty that its communities are seeking. The key elements are described here:

Surface Water Sustainable Diversion Limits (SDLs): For surface water, SDLs should include a specified allowance for smart and efficient solutions for achieving environmental outcomes. This could be expressed as a formula within the Basin Plan, where the specified allowance, and a fixed volume of held environmental entitlement comprise the full SDL.

In the proposed Plan, the SDL for surface water across the Basin is expressed as:

Sustainable Diversion Limit (SDL) = Baseline Diversion Limit (BDL) – 2,750 GL/yr

Under this approach, the gap between BDLs and the new SDLs is 2,750 GL of held environmental water, which delivers a certain level of environmental outcome. However, the Victorian Government believes that environmental outcomes could be achieved more effectively and efficiently if the 2,750 GL gap was expressed as a formula where:

2,750 GL (env. outcomes) = X GL (held env. water) + [2,750 GL – X GL (held env. water equivalents)]

Under this approach '**X GL**' is returned water, with the priority that it come from infrastructure and on-farm programs, ahead of strategic purchase. For certainty, '**X GL**' is a figure that is locked into the Basin Plan in 2012, with the expectation that it would not change (i.e. through a specified 2015 Review). This would ensure that communities know up front just how much water will be removed from the consumptive pool over the long term.

From the formula, the '**2,750 GL – X GL**' water equivalents component would come from environmental works and measures, changes to river system rules and operations, smarter use of held environmental entitlements and other measures that improve the efficiency of achieving environmental outcomes, without requiring further reductions from the consumptive pool. The incentive for the 2015 Review then becomes making best use of held environmental water, as described below.

Smart and Efficient Solutions for Achieving Environmental Outcomes: Providing useful input to the 2015 Review as re-cast under the MDB Agreement, action would commence on better clarifying the role of works in enhancing environmental outcomes, given the results of the MDBA's modelling with regard to the impact of system delivery constraints. Pending the outcome of this, Basin jurisdictions would develop with the Commonwealth agreed works proposals with an agreed timeframe.

Further, in line with proposals put forward throughout this submission, as input to the re-cast 2015 Review, further work would be undertaken to identify options for smarter systems management and operations that would enable environmental water to be used more efficiently, thus reducing the volume that needs to be taken from productive use.

2015 Review: Under the above approach, the MDBA's proposed 2015 Review is removed from the Basin Plan and is instead undertaken as joint business under the auspices of the MDB Agreement. It would be intended that the Review would trigger action, collectively by all Basin Governments, if expected outcomes are not being achieved.

Underpinning this, the Review would be focussed on maximising the outcomes achievable from the volume of held environmental water specified in the version of the Basin Plan considered by Federal Parliament in 2012.

A review of the Basin Plan Environmental Watering Plan, and the Commonwealth Environmental Water Holder's operation would also be undertaken, based on an assessment of the best way to achieve effective environmental watering across the Basin.

Groundwater Sustainable Diversion Limits (SDLs): The Victorian Government considers that there should be an increase in the SDL for the State's upland areas by 26 GL, which provides for application of a consistent approach with bordering areas in NSW. In addition, the MDBA should recognise 100% of the State's PCV and current entitlement volumes for all Water Supply Protection Areas and Groundwater Management Areas, which increases SDLs by, in total 61 GL.

Guidelines to be Developed in Negotiation with Basin State Governments: Onerous prescription under the Plan is to be moved to guidelines, which are then negotiated with jurisdictions, based on the principle of least-cost regulatory burden. This allows jurisdictions to be involved in decision-making around new activities and associated cost implications.

Finalisation of Transitional Arrangements: Settlement of arrangements that provide legal certainty; based on the principle that the Basin Plan commences in Victoria in 2019 and the State's existing water management instruments prevail in the interim.

Beyond this, an Intergovernmental Agreement should be finalised between Basin jurisdictions, which binds Governments to put in place arrangements during the transition period to 2019. This should allow for key learnings (e.g. from the proposed 2015 Review under the MDB Agreement) to be incorporated into both interim arrangements, and formal arrangements from 2019.

Appropriate Adjustment Assistance: Provision of appropriate transitional adjustment assistance for Basin communities, based on the final suite of proposals contained in the version of the Plan that is considered by Federal Parliament in 2012.

The Victorian Government strongly urges the MDBA to take on board the suggestions provided here, and use them to inform the revisions that are needed to the *proposed Basin Plan*. The Victorian Government reaffirms its view that the Commonwealth must formally commit to the assistance required to help communities and Basin State Governments transition to the final Basin Plan. This will be fundamental to the Plan's ultimate success.

Section 5 – Appendices

Appendix A – Outcomes Achievable with 2,750 GL

Environmental Watering Outcomes from the proposed Basin Plan – Key Issues

The outcomes which the Victorian Government understands are likely to be achieved under the MDBA's proposed 2750 GL water recovery are relatively poor (other than for in channel flows and low elevations of the floodplain), particularly in the light of the socio-economic impacts that will arise from recovering this water.

Even increasing the returned volume to 3,200 GL would make marginal difference to environmental outcomes, including the long dry periods between flood events. This is primarily because targeting the mid to high elevations of the floodplains is highly problematic due to physical delivery constraints (e.g. public and private infrastructure, private land).

There are also a number of inadequacies with the MDBA's modelling approach, which result in critical uncertainties in terms of outcomes. The key issue in relation to environmental water is the absence of an environmental water account within the MDBA's model, similar to accounts that are used for other water users. This leads to difficulty in determining the best outcomes that can be achieved from held water, as well as tracking its availability and use.

Environmental Outcomes of Proposed Water Recovery for Floodplains

The MDBA has provided an assessment of the effectiveness of three water recovery scenarios: 2,400 GL; 2,800 GL; and 3,200 GL.

With regard to the frequency of floods which reach various levels on the floodplain, there is little difference between the three water recovery scenarios. All largely meet the needs of the low elevations of the floodplains, comprising creeks and some wetlands, but are unable to effectively meet targets on mid or high elevations of floodplain. In particular, for the high elevations of the floodplain, the 2,800 GL scenario is generally the same as the base case.

The lack of a substantial difference in outcomes is most likely highly influenced by physical constraints to held environmental water delivery, as well as the very large volumes needed to raise the river high enough to reach mid to high elevations of the floodplain, which need to remain high long enough for the water to spread, and meet the flow requirements of these systems.

Supporting this, CSIRO, in its November 2011 review of the science behind the Basin Plan found that the proposed 2,750 GL of returned water failed to meet the majority of the MDBA's hydrological (and hence ecological) targets. CSIRO also suggested some of the targets were not consistent with unavoidable operating constraints. CSIRO further noted that the limitations on the MDBA's modelling suggested that the outcomes reported in the Authority's subsequent reports were likely to be less than what could be achieved in practice.

The relatively poor outcomes, coupled with the similarity of outcomes across the MDBA's range of scenarios (2400 GL to 3200 GL), highlights the concern that environmental targets for many floodplain sites in the southern basin will not be met unless environmental works become a fundamental part of a Commonwealth and MDBA package to deliver floodplain objectives. This does not negate the benefits of providing improvement to the low to mid level flows, but avoids reliance on them to meet the full suite of environmental objectives being sought.

Conflicting Information in Two MDBA Reports – Length of Dry Periods

A discrepancy in the MDBA's reported outcomes from watering further highlights the uncertainty over what can be achieved with the proposed 2,750 GL reduction in held productive water.

The modelling behind the *proposed Basin Plan*, reported in the MDBA's *Hydrologic Modelling Report*, provides clear results describing the outcomes that can be achieved through delivery of environmental water along the rivers. However, information in the *ESLT Report* on the length of dry periods (a critical environmental parameter) differs in some important instances from the modelled results.

The *ESLT Report* appears to improve the apparent effectiveness of the 2,800 GL and 3,200 GL scenarios, as compared with the 2400 GL scenario for the few sites reported. By comparison, the *Hydrologic Modelling Report* demonstrates little or no improvement over baseline for duration of dry periods, and very rarely shows a difference between the three water recovery scenarios.

While the MDBA may have a sound basis for this, it is not transparent, and brings into question how other data have been treated, including whether all flow scenarios have been treated in the same way. For the purposes of transparency, the method needs to be described and documented.

Some key examples are provided in the Tables below. Differences at Hattah Lakes have been reported in section 1.4 of this submission.

Riverland (Chowilla, Lindsay Wallpolla) Dry Periods – Comparison of Results Reported in the MDBA's Hydrological Modelling Report and ESLT Report

Flow target		*Maximum Dry Period in Years* *(figures in brackets are from the ESLT Report)*			
Daily Flow Threshold (ML)	*Duration (Days)*	*Baseline Scenario*	*2,400 GL*	*2,800 GL*	*3,200 GL*
40,000	*30*	13 (10)	9 (3)	9 (3)	9 (3)
40,000	*90*	13 (12)	13 (10)	13 (8)	13 (8)
60,000	*60*	22 (11)	22 (11)	22 (8)	21 (8)
80,000	*30*	22 (21)	22 (21)	22 (21)	22 (13)
100 000	*30*	24	38	38	24
125 000	*21*	13	38	38	38

Lower Goulburn Floodplain Dry Periods – Comparison of Results Reported in MDBA's Hydrological Modelling Report and ESLT Report

Flow target		*Maximum Dry Period in Years* *(figures in brackets are from the ESLT Report)*			
Daily Flow Threshold (ML)	*Duration (Days)*	*Baseline Scenario*	*2,400 GL*	*2,800 GL*	*3,200 GL*
25,000	*7*	13 (12)	9 (8)	9 (4)	9 (4)
30,000	*7*	13 (12)	13 (8)	13 (5)	13 (5)
30,000	*14*	13 (12)	13 (12)	13 (12)	13 (12)
30,000	*30*	22 (21)	21 (13)	34 (12)	34 (12)
45,000	*7*	17 (16)	17 (12)	17 (12)	17 (12)

Lower Lakes, Coorong and Murray Mouth

Outcomes at the Lower Lakes, Murray Mouth and Coorong estuary further demonstrate the similarity in outcome between the three recovery scenarios. All ensure that the Lower Lakes levels never approach -0.5m ASL (a trigger of concern regarding risk of acidity in the lakes), remain above 0.0m ASL, and for the majority of the time above +0.5m ASL - ensuring connectivity with Lake Albert (around +0.03 ASL) and the Coorong fishways (around +0.5m ASL).

A key issue of concern has been salinity levels in the Coorong estuary. The Coorong comprises two connected lagoons, the North Lagoon – closest to the Murray Mouth, and the South Lagoon.

As the MDBA's ESLT report notes, there is generally little difference between the three modelled water recovery scenarios for the Coorong indicators, and maximum salinities are generally below targets. The ESLT report does, however, conclude that the maximum salinities would be exceeded during extreme drought under the 2400 GL recovery scenario, and that this would pose extreme risk to the Ruppia and threaten the ecological character of its supporting ecosystem.

The maximum salinity targets in the South Lagoon of the Coorong estuary (farthest from the mouth of the Murray River), established for *Ruppia tuberosa*, are met under the 3200 GL and 2750 GL recovery scenarios, and not quite met for the 2400 GL scenario. The question here is whether the difference is significant. The maximum target for the South Lagoon (the more saline one) is 130 g/l. Under the 2400 GL scenario, it is exceeded once by up to 8 g/l for a maximum of 64 days over the 115 years.

This level of exceedence of a target based on recruitment, not survival, seems unlikely to pose "significant risk to the remaining populations of *Ruppia*, with implications for the overall health and ecological character of the site" (from MDBA's ESLT report). Given the uncertainty around seagrass tolerances noted by seagrass ecologists, and that the Ramsar Ecological Character description for the site notes that issues of turbidity and water level are significant risks, the question of whether this is sufficient justification for an additional 400 GL of water, to be taken from productive use, is debatable.

In the North Lagoon, the proposed maximum tolerance is 50 g/l, based on *Ruppia megacarpa*. The 2750 GL scenario exceeds the maximum tolerance by up to 6 g/l for 75 days over the 114 years, peaking at 56 g/l. The 2400 GL scenario exceeds this by up to 25 mg/l, for almost 6 months over the 114 year period.

Again, the question to consider is the significance of the exceedence on the health of the plants. It is our understanding that the figure is based on recruitment, rather than tolerances of the plants, and that these plants are very sensitive to other issues, as noted in the Ramsar Ecological Character description for the site.

A highly relevant question is whether the decline of the seagrass in the Coorong is due to salinity, or to other factors resulting from barrage operation, such as sediment build up, turbidity and reduced connection with the sea. Hence provision of water from the Murray seems unlikely to be the only solution.

It is unclear whether the MDBA has considered options for protecting the condition of the Coorong estuary other than increasing volumes in the River Murray. We understand that there has been some inclusion in the modelling of returning some south east drainage water to the South Lagoon, but we are unclear on the volume and timing.

Historically, inflows from the south-east of South Australia were an important source of water for the South Lagoon. Hence it is not immediately obvious why salinity peaks in this lagoon should drive reductions in productive water use across the rest of the Basin, without also considering opportunities to source additional dilution water from the local south-east drainage system. The benefit of a megalitre of water from the catchments in the south-east of South Australia will provide a much greater benefit to the South Lagoon than a megalitre of water taken from the Murray. Addressing salinity issues in the South Lagoon by removing water from productive use in upstream Murray-Darling catchments is an inefficient approach.

An additional issue that should be considered is that any benefits for the South Lagoon derived from water returned under the Basin Plan could be eroded by increased groundwater or surface water use in, or decreased drainage from, South Australia's south-east catchments. Management of water in the south-east catchments remains in the hands of the South Australian government, because the south-east catchments are not included within the area regulated by the Basin Plan. As a result, the Basin Plan and the Authority have no powers to control water or drainage management in the south-east catchments.

Appendix B - Environmental Watering Plan

Overview

Key issues with the Environmental Watering Plan (EWP) include:

- Misalignment between the proposed objectives and targets, and what can actually be achieved with environmental water through the EWP.
- Lack of clear logic behind the assumptions that: a) provision of water to meet State derived objectives and targets under Long Term Watering Plans (LTWPs) adds up to the EWP objectives and targets; and b) the proposed process for managing environmental water will mean that the targets will be met.

  The lack of clear logic makes the requirement for States to report on achievement of objectives in LTWPs concerning, as States have no control over watering decisions, and no certainty that the water returned will meet these objectives.

In addition, an incomplete environmental water management process results in confusion about how decisions will be made, on what, by whom, and how the objectives and targets will actually be achieved. Key issues include:

- the process to make decisions on use of water following development of a list of priority sites across the Basin, including engagement of river operators and jurisdictional environmental managers to develop sensible, workable plans for use of water;
- no apparent consideration of differences in approach between regulated and unregulated water, and the relevance of an annual bidding process for all returned water;
- over prescription of content in planning documents, in particular when the roles of the various planning documents appear confused - the key concern here being the separation of documents specifying environmental demands, which are important as planning tools, and documents that specify 'supply' - which reflect decisions on actual allocation of the water;
- how the 'schedules' proposed under section 30 of the Commonwealth Water Act fit into the environmental water management framework;
- interactions between State water resource plans and the EWP to deliver the objectives and targets of the EWP;
- whether there is any consideration of development of delivery plans to co-ordinate watering across sites; and
- confusion around who applies principles, under Chapter 7 of the proposed Plan and under what circumstances.

Further, the interaction with other Chapters of the *proposed Basin Plan* is unclear, in particular, linkages that could potentially affect decision-making on use of environmental water under Chapter 8, and reporting under Chapter 12.

The purpose of the review of the EWP is also unclear, particularly whether it is intended to be an evaluation of effectiveness, a review of compliance with processes, or a review of the effectiveness of processes.

Beyond this, there is a concerning lack of clarity provided under Chapter 7 regarding accountabilities, roles and obligations for States and the Commonwealth, including in relation to: decisions on allocation of returned water to meet the proposed new SDLs; obligations on the various holders of environmental water across the Basin; the role of the Commonwealth Environmental Water Holder (CEWH), who will hold the bulk of water needed to meet EWP outcomes; the obligation to meet objectives and targets under LTWPs, and the implications if these are not met; and the obligation on the States to undertake additional monitoring in line with targets, which has relevance for requirements under Chapter 12.

The inclusion of excessive detail in the Basin Plan legislative instrument curtails adaptive management and the ability to learn and improve through ongoing management of environmental water. The EWP is overly prescriptive, including content of the planning documents, reporting requirements under Schedule 10 of Chapter 12, and the targets that have been set under Schedule 7.

The use of functions is problematic and it appears that the MDBA has put insufficient thought into their application and usefulness.

Misalignment between Environmental Watering Outcomes under the proposed Plan and EWP Objectives and Targets

Although the objectives under sections 7.03 to 7.06 of the proposed Plan are considered by the MDBA to be high level and aspirational, many are unachievable. Therefore, the EWP has the potential to mislead the community into expecting that these issues can be addressed if the proposed volume of 2,750 GL of surface water is returned from the consumptive pool.

To illustrate, most objectives of the EWP are broader than can be achieved by water alone (e.g. sections 7.04(2)a; 7.04(2)b; 7.04(3)a and b; 7.05(2); 7.05(3)). They require land management actions or acquisition, or changes to existing policy.

Further, significant components of some objectives are not addressed by the Plan (e.g. section 7.05(3)e to overcome or minimise barriers; 7.06(5) mitigating human induced threats, for example impact of alien species).

In addition, other objectives which require water won't actually receive enough water for the objective to be achieved (e.g. 7.04(2)a - maintain the ecological character of Ramsar sites; 7.06(4) - provide wetting and drying cycles that don't exceed ecosystem tolerances). The modelling undertaken by the MDBA indicates that physical constraints will prevent achievement of these objectives.

Concerns with Proposed Targets

A suite of targets has been proposed to inform progress toward the EWP objectives. The usual purpose of targets is to set clear measurable outcomes that, when met, demonstrate real progress towards achieving the objectives. Targets can give the resource manager clarity about what one is trying to achieve, and to assist in making decisions on prioritising or adjusting management to ensure that the targets are met. Additionally, if targets are not achieved, then this provides information on the management approach and whether it needs to be adjusted (i.e. the basic principles of adaptive management).

The targets in the *proposed Basin Plan* (schedule 7) are, until 2019, no loss or degradation in a number of ecosystem components, including: flow regimes; connectivity; floodplains and wetland types and condition; diversity and condition of native water dependant vegetation; and recruitment of fish, birds and vegetation. After 2019, these must all improve.

Such broad aspirational targets will not provide the community, nor managers of environmental water, with useful information as to what the Plan actually achieves from the water that is taken from the consumptive pool, and will not inform better management options. The targets should give the community confidence that there has been sound thought put into determining what needs to be, and can be , achieved and the ability to assess whether any of this has been achieved.

Key problems include:

- What do the targets mean? No decline in any year, or no decline by 2019? Is it an absolute 'no decline' anywhere; or a net 'no decline'? Can amount of decline be compared against amount of improvement?
- Must there be improvement every year from 2019? Up until when? What if some systems don't need further improvement? Or is the 'improvement' compared to a baseline, rather than the previous period, so that as long as condition doesn't drop below a baseline, the target is met?
- These targets are not currently measurable. To implement this approach, a baseline condition is needed, which is not available.
- The proposed water recovery of 2,750 GL of held surface water entitlements, and its subsequent delivery, won't enable these targets to be met on the mid to high elevation floodplains (because of the reality of public and private infrastructure, and limits on deliberate flooding of private land). Neither will it break extended dry periods, which means the Basin Plan will fail to achieve its outcomes. A report of failure against a high level target is unhelpful in determining what progress has actually been made. This is a reason to provide sensible, progressive, targets that can demonstrate progress, and can therefore inform adaptive management.

The Victorian Government recommends that the MDBA: develop targets which are measurable, can be reported against and can be used to measure progress; and where possible, move targets to guidelines so that sensible targets can be developed through consideration of water availability, and feasibility of delivery without needing to undertake a formal amendment to the Basin Plan under the Commonwealth Water Act.

Incomplete Water Management Process

Chapter 7 describes the EWP, and the environmental management framework; however, it is not clear how this will work in practice. It is also unclear from the provisions in Chapter 7 how the Murray will be managed in its entirety, and what arrangements the MDBA is intending that will provide the necessary links between State water resource plans.

While the Victorian Government does not wish to have all the details included in a legislative instrument, comfort must be provided that the process itself is complete, and will work. Core concerns are as follows:

Process for determining which sites will be allocated water: As identified in section 2.4 of the submission, the process to identify the Basin-wide priority sites is unclear, and given its critical importance in achieving the EWP objectives and targets, this needs more careful thinking through to ensure its workability.

The Victorian Government requests that the MDBA clarify its approach to identifying Basin-wide priorities for environmental water. The MDBA should firstly produce the Basin priorities, compiled from the jurisdictions' Annual Watering Proposals, and following this, the MDBA should convene an advisory group to develop these into priority proposals to water holders as the season progresses.

The advisory group should include river operators, jurisdictional environmental managers and water holders, and would be tasked to refine the priorities as the year progresses and climatic conditions become clearer. The Group would also develop proposals for single or multi-site watering that optimise the available water with river operations. The MDBA should then engage with environmental water holders to confirm the commitment of environmental water to meet these priorities.

What is the role of water returned to the environment under the Water Act: There is no clearly defined role, or responsibilities prescribed for the CEWH anywhere in Chapter 7, or elsewhere in the proposed Plan. This raises issues, with the most significant including:

- There is no requirement within Chapter 7 for the CEWH to use its water in-line with the Environmental Watering Plan, or identified Basin watering priorities, despite section 106(4)(a) of the Commonwealth Water Act specifying that the CEWH must manage the Commonwealth environmental water holdings in accordance with the EWP.
- In addition, the ability of States to meet EWP requirements under State water resource plans (WRPs) will be substantially dependent upon the CEWH releasing its holdings in a way that helps facilitate meeting those requirements.

The CEWH's role must be written into the Plan in a way as anticipated under the Commonwealth Act, to ensure that all parties with responsibility for environmental watering under the Plan are held to appropriate account.

Clarity is important, especially with regard to the following sections of Chapter 7, which bring in room for uncertainty over use of the Basin priorities to guide CEWH held water:

- The principles in Division 7 (section 7.25) only require watering to be undertaken 'having regard' to Basin priorities, which the MDBA has previously indicated, is considered a low bar (e.g. with relation to 'have regard' requirements in Chapter 8).

- Section 7.24 indicates that holders of held environmental water and managers of planned environmental water may indicate to States what their own priorities are, which could set up a process outside of the EWP principles for setting priorities for applying water.
- Schedules referred to in 7.25(4) appear to have the potential to establish bilateral agreements outside the EWP and the principles for directing water application.

Planning Framework for Regulated and Unregulated Systems: Chapter 7 fails to differentiate between the very different approaches to environmental watering that are needed for the northern and southern Basin. A one-size-fits-all approach is not likely to be appropriate, or effective, in practice. Chapter 7 must directly address this.

The Environmental Management Framework seems targeted at annual decisions, based on annual proposals from States. Annual decisions may be appropriate for entitlements that can be traded or moved between sites, as is the case with much of the water in the southern Basin.

However, even in the southern Basin, with the large volumes of water that are proposed to be held by the CEWH, this will be a very onerous, time consuming way to get decisions on the use of environmental water. An annual prioritisation for the total volume of returned water is not likely to be desirable over the long term, yet it is unclear if there is an alternative possible under the MDBA's approach.

Systems where there is little flexibility in use, such as all or most of the northern Basin, where water is protected through managing diversions rather than release of entitlement, need a different approach. This could be use of agreed operating rules implemented by storage managers, rather than through annual decisions.

Additionally, there is merit in establishing operating rules for a portion of environmental water that is held for use in the southern system, where the annual use is clear and reasonably predictable and there is little need for decision making. The annual prioritisation could then be constrained to sites where it will best contribute to effective use of environmental water.

Overall, an enhanced process could:

- Have separate arrangements for regulated and unregulated systems – where, for unregulated systems, long term agreements could be considered, with facility made for this in the EWP.
- In the southern connected system, rather than subject all environmental water to annual decisions, enable a process for long term agreements over use of entitlement for in-channel needs, which has the benefit of providing certainty over condition in those systems. To complement this, the use of intermittent large volumes to provide channel-full or overbank flows, where decisions may be required between sites, could then be subject to an annual bidding process.
- Incorporate triggers where long term agreements revert to annual decision-making (e.g. during drought, or other situations where more control may be needed).

Application of the Principles Under Divisions 6 and 7 of Chapter 7

There are two sets of principles contained in Chapter 7:

- principles to be applied to determine the priorities for applying environmental water; and
- principles to be applied in environmental watering.

More clarity is needed on the purpose of these two sets of principles, how they should be applied, and by whom. For example, there is no clear requirement for the principles to be used by the CEWH, who will hold the largest volume of environmental water within the Basin, in identifying which priority sites will be allocated water each year.

More specifically, in relation to Division 6 principles:

- Principle 3 should be removed as it is not about identification of priorities.
- Section 7.34(f) should be removed as it has the potential to set up a judgement of the effectiveness of jurisdictions' natural resource plans. It is also unclear what this section adds to 7.34(e). For similar reasons, section 7.35(e) should also be removed.
- Section 7.35(f) should be removed or modified, as optimisation should have been done by the MDBA when making its decisions to direct the recovery of water. Sites which require watering should primarily be identified on the basis of watering need.

  Related to this, a useful alternative principle could be to consider options for environmental water delivery that optimises social or economic outcomes.
- Section 7.36(b) should be removed as the value of the environmental outcomes will been taken into account in choosing priorities through application of section 7.34, and therefore should not be in the 'risk' section.

Further, in relation to Division 7 principles:

- Section 7.44(a) should be modified as watering does not always need to maximise multiple environmental benefits (e.g. some watering is targeted at a single wetland). Any decision on the use of environmental water should achieve the best environmental benefit for the necessary volume and cost, which supports the multiple use of environmental water, without dis-benefiting small sites.
- Section 7.44(d) should be removed as this has already been done under the Division 6 principles, where priority sites are selected.
- Principle 9 should be removed as it is already included in Principle 2.
- Principle 10 appears to be a strategy or workplan, rather than a principle. It is not clear who is expected to apply it.

Ecological Functions

The requirement under the EWP to identify ecological functions within State water resource plans areas, and set related objectives and targets under LTWPs does not add value. There is also no explicit requirement under the Commonwealth Water Act sections prescribing the EWP's content that ecological functions be addressed in this way. These sections of Chapter 7 should therefore be removed.

Section 7.29(1)(a) should also be removed as the obligation that watering requirements for functions be supported by information related to underlying physical and geomorphic processes is seen to add no value.

Supporting this, CSIRO's November 2011 review of the science behind the Basin Plan, found that the use of ecological functions by the MDBA in determining environmental watering needs is not fully defensible, as: the classification is weak; the links between functions and hydrological variability are poorly described; and there is no scientific evidence to justify the hydrological targets.

Appendix C - Water Quality and Salinity Management

Key Areas of Concern with Chapter 8 - Overview

The Chapter does not:

- Make clear the anticipated benefits of the proposed new arrangements.
- Recognise the considerable improvements in collaborative water quality and salinity management that have been made over the last three decades.
- Highlight any priority issue that needs to be urgently addressed by the proposals contained in the Chapter.

In addition, the Chapter:

- Overlays new regulation on existing national, Basin and State legislation, regulation and agreements, without examining the consequences arising from confusion of powers, responsibilities and likely conflicting objectives. This threatens to undermine the largely effective existing management arrangements, leading to regulatory inefficiencies.
- Introduces proposals that appear to go beyond the requirements of the Commonwealth Water Act. For example, Chapter 8 implies a number of inter-linkages to land management, which reflects that a significant proportion of nutrient and salinity management activities take place on land, and aren't necessarily resolvable purely through the use of flows. This matter is not recognised in any detailed way in Chapter 8, which could lead to substantial implementation risks and issues.

More broadly, in relation to this Chapter:

- The new suite of targets proposed have not been evaluated for practicality, effectiveness and cost-efficiency, nor is there any mechanism provided that allows for this. This is highly concerning given the adoption of the proposed new targets will require changes to management, although to what extent (and hence, to what cost), is currently uncertain.
- The proposals it contains have the potential to restrict arrangements that exist under current State, Basin-wide and national frameworks. Existing frameworks provide for decision-making based on practical, effective and cost efficient management actions for both water quality and salinity. The proposals under Chapter 8 restrict the ability to adjust targets and associated management actions to adapt to new knowledge or changed circumstances.
- Proposals are likely to require that States allocate substantially increased resources in order to be compliant with water quality regulation, but proposes no additional funding programs to meet the likely costing shortfall.

Proposed Targets are Problematic

The MDBA provides no reasoning for why there are so many targets contained in Chapter 8, why they are proposed, what they are intended to achieve, and what is the anticipated benefit. Whilst the Commonwealth Water Act requires that targets be set for salinity, and prescribes minimum requirements for targets, it doesn't require objectives or targets for any other parameter, nor does it explicitly require that a new suite of targets be set.

From the way the Chapter is drafted, the nature of targets remains uncertain. This is a major cause of concern to the Victorian Government. The large difference between a broad objective and a mandated target would have major implications for salinity and water quality management within the State.

Further complicating this, Chapter 9 of the *proposed Basin Plan* requires State water resource plans to have a Water Quality Management Plan (WQMP). The WQMP **must** specify measures that will contribute to achieving Chapter 8 objectives. Regard must be had to most of the target values from Chapter 8 in developing these measures (section 9.37 refers).

The MDBA's requirements regarding the development of the WQMP, and associated reporting obligations proposed under Chapter 12 have the potential to extend the regulatory and reporting obligations on jurisdictions well beyond existing requirements, and appear to go further than the requirements of the Commonwealth Water Act.

No justification for this additional obligation on jurisdictions is provided, nor is there any impact assessment or risk assessment that would guide the administration of the proposed new targets. This has the potential to open up existing management arrangements to increasing complexity and conflict.

Proposals for Salinity Management Under Chapter 8

The existing *Basin Salinity Management Strategy* (BSMS) already contains overarching targets. However, Chapter 8 as written, proposes to introduce a new suite of targets that are beyond the targets as now agreed. These new targets are set as upper limits, with the most restrictive target applying for each characteristic. For example, the proposed salt load target at Lock 7 (at the Victorian/South Australian border) appears to be less than the existing long term salinity level at this point.

The historical approach to managing salinity, both for average levels and peak salinity, has been to keep salt out of the rivers. This is supported by clear and transparent arrangements, that have been collectively agreed to by Basin Governments, which:

- Specify accountable actions.
- Are driven by a system of debits and credits that allow for tradeoffs, accounting and cost sharing.
- Separate salinity effects (physical) and salinity cost effects (economic) and requires accounting for both.

It is unclear how the above fits with the proposed approach under Chapter 8. In particular, it is unclear what is expected to happen where the salinity of receiving waters from salt interception schemes will rise above the restrictive targets contained in Chapter 8.

In addition, the present arrangements also allow for some deterioration at certain locations, provided this is balanced by overall improvements, an approach that is likely to be in direct conflict with the restrictive limits proposed in Chapter 8. The imposition of restrictive targets is also likely to conflict with the present process of balancing impacts through a system of debits and credits.

Also concerning, there is no explicit commitment in the *proposed Basin Plan* to retain the BSMS and associated arrangements that give effect to it. Related to this, there are no administrative arrangements specified that would replace those already in place.

The Victorian Government's view is that Chapter 8 should adopt the BSMS as the mechanism through which salinity is managed. If additional measures are demonstrated to be required, then their development could then be mandated in the *proposed Basin Plan*, subject to evidence of practicality, effectiveness and cost efficiency.

Related to this, the MDB Agreement currently has clear arrangements for taking water quality into account in making operational decisions, and when water may be taken to be used specifically to manage water quality. It is not clear from Chapter 8 whether its requirements in relation to operational decisions are consistent with what is currently specified in the MDB Agreement. This poses a substantial risk to States, as salinity targets set in this Chapter cover a wider range of issues, and are more restrictive when compared to what is currently contained in the MDB Agreement.

More broadly, it is unclear how the proposed new targets, and existing targets are to be managed alongside each other, especially given the extremely high likelihood that actions to meet the full range of new and existing targets will conflict.

The Salt Load Target

Chapter 8 of the *proposed Basin Plan* introduces a suite of new targets. One of these is that for the first time there is to be a salt load target, and that this target is to be set at a minimum of 2 Million tonnes (2 Mt) of salt from the Murray River system to the Southern Ocean, for each water accounting period.

The proposed salt-load target for the River Murray System is for the purpose of:

- informing flow management decisions; and
- monitoring and evaluating the effectiveness of the Plan; and
- ensuring adequate flushing of salt to the ocean.

At present, there is a salt load target set for Morgan under the BSMS and this target equates to 1.760 Mt maximum salt load passing Morgan. This is set as a maximum amount. It appears that the proposed salt load target of 2 Mt at the mouth of the Murray River was set on the basis of the Morgan target plus 10%.

The MDBA is in the process of reviewing Schedule B of the MDB Agreement for consistency with the *proposed Basin Plan*. A draft report from the AGSO, acting as a consultant to the Authority, has identified a potential for the salt load target proposed in Chapter 8, and the Morgan target to be inconsistent. However the review notes that as the value of the two targets are comparable, it may be possible to meet both targets simultaneously; however as one is set at a maximum level and the other set at a minimum level, it could be argued that there is some level of inconsistency between the two.

The Victorian Government has consistently argued that any new targets proposed in Chapter 8 should be evaluated for efficiency, cost effectiveness and administrative practicality before they are adopted.

Whilst the MDBA is in the process of evaluating the practicality of meeting the proposed Salinity Operational Targets, no equivalent analysis has been undertaken for the proposed Salt Load Target.

There does not appear to be any comprehensive analysis of whether or not it is practical to meet the target of 2 Mt at the Murray Mouth for each water accounting period. In this regard, four issues are important to consider:

- the Murray River at Morgan may be passing much less than 1.760 Mt at present;
- the recently released modelling undertaken by the MDBA indicates that 2 Mt at the Murray Mouth may only be met with an SDL of greater than 3,400 GL;
- the accounting period set under Schedule B of the MDB Agreement, and that proposed in Chapter 8 for the Salt Load targets differ substantially; and
- the limits of Acceptable Change for the Lower Lakes set under the Ramsar Convention include additional salinity targets.

Is There Now 1.76 Mt of Salt Passing Morgan?

The salt load target (maximum) is determined from the product of water flow (ML) and salinity (concentration) at Morgan. The Morgan site is also chosen as a Salinity Operation Target and hence, was investigated by the Authority in its review of the Salinity Operational Targets. That review shows that the concentration of salinity at Morgan under present conditions is less than the target value of 800 EC, 95% of the time.

An unpublished report commissioned by the Authority, and prepared by AWE titled *River Murray Floodplain Salt Mobilisation and Salinity Exceedence at Morgan* also identified that under present operating arrangements, it is highly likely that the Morgan target of 800 EC is being met more than 95% of the time and may be as high as 98% of the time. An alternative way of looking at this is that the Morgan target may be running at 754 EC, 95% of the time, and that the salt load passing Morgan may be only be 1.6 Mt.

The AWE report explains this improved condition in the context of the efficient operation of the new Salt Interception Schemes immediately upstream of Morgan. The Victorian Government notes that the Authority has not yet taken a formal view on this report.

Under the BSMS, the partner Governments agreed to construct additional Salt Interception Schemes, which when completed will contribute a further 61 EC reduction at Morgan, and perhaps as high as a 74 EC reduction. The beneficial salinity mitigation impacts of only some of these more recent Schemes were evaluated in the AWE Report. This means that as most of the additional salt interception capability was constructed between the Victorian/NSW border with South Australia and Morgan, the Salinity Operational Target will probably be met at Morgan and Murray Bridge, but not at Burtundy (NSW) nor upstream of the SA Border (at Lock 7).

The MDBA's *Hydrologic Modelling Report* states that the proposed salt load target of 2 Mt can be reached when there is additional salt load generated in the upstream catchments of both the Murray and Darling River systems. The modelling report refers to the former MDB Commission's 1999 *Basin Salinity Audit* as the reference for where the additional salt may originate.

However, that same modelling report failed to acknowledge that the *BSMS Mid Term Review* in 2007 concluded that "*predicted future salt loads in the 1999 Basin Salinity Audit overestimate the salinity risk*".

Contrary to the claim on page 211 of the *Hydrologic Modelling Report*, subsequent studies do not indicate a rise in salt load. It is now widely recognized that the salt loads identified in the 1999 Basin Salinity Audit are unlikely to eventuate at least in the next 20, and perhaps 50, years. This was recognized in the *BSMS Mid Term Review* and has continued to be recognized in subsequent *BSMS Annual Reports*.

The reason that these ultimate salt loads have not been reached appears to relate to:

- a potential overestimation of salt loads in 1999 *Basin Salinity Audit*;
- continuing dry or drought conditions since that report;
- improved catchment conditions; and
- the construction and operation of new Salt Interception Schemes.

Whatever the reason, it can be reasonably assumed that the rate of rise of salt load identified in the Audit has not and will not eventuate at least in the next 20 to 50 years. The Victorian Government is concerned that the contribution of these new Salt Interception Schemes has not been properly factored into the proposed Salt Load Target.

The Accounting Period Under Schedule B of the MDBA Agreement and that Proposed Under Chapter 8 for the Salt Load Targets Differ Substantially

The Morgan target is set at less than 800 EC 95% of the time. The proposed salt load target is set as a salt load against the number of tonnes of salt per year averaged over the preceding 10 years. The differences in these exceedence values have significant implications for river managers.

A recent South Australian Government report shows that the tonnes of salt moving across the barrages remained fairly constant for 30 years from 1978 until 2000 (see graph below).

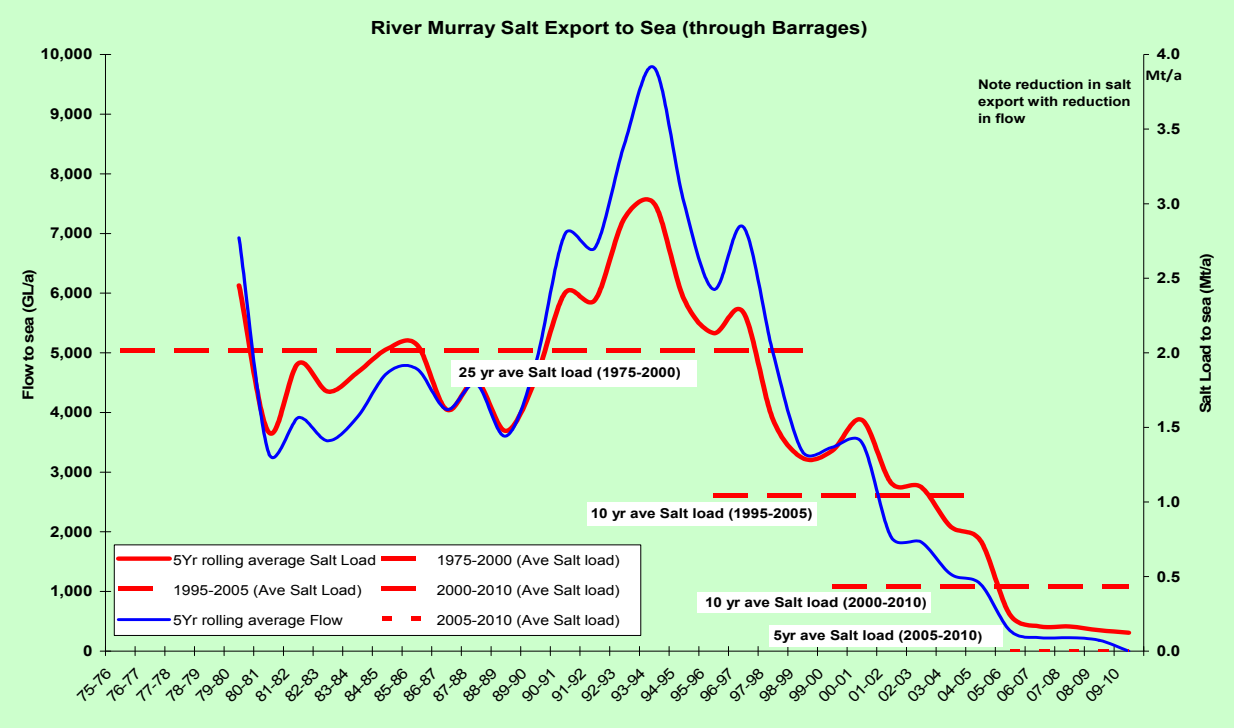
When flows across the barrages declined dramatically from 2000 onwards, so too did the tonnes of salt crossing the barrages. Put simply, the salt load reaching the Southern Ocean was highly correlated with the volume of water also reaching the Southern Ocean.

The information in the South Australian Government report, as well as Figure 68 in the *Hydrologic Modelling Report* shows that the Salt Load Target is not met in a series of years coinciding with drought.

Even at a hypothetical water reduction scenario of 3,400 GL, the target is not met, and all projections converge at this point. As the length of time a drought persists is not known, operational rules rather than targets would appear more suitable to use in managing against the regularity of such circumstances.

The Limits of Acceptable Change for the Lower Lakes Set Under the Ramsar Convention Include Additional Salinity Targets

Recent evidence presented by the South Australian EPA shows a rapid rise in the concentration of salinity in the Lower Lakes following closure of the Murray Mouth. The Victorian Government is not aware of any detailed modelling having been undertaken in respect to the process by which this rapid concentration occurred.



However, at the same time, the Victorian Government observed similar rises in salinity concentration in lakes as they dried out within the State. As an example, modelling undertaken for Lake Hawthorn demonstrated that such rapid rises can only be explained if there is a local source of highly saline groundwater. These rises aren't able to be explained just in terms of evaporative concentration.

The Lower Lakes are listed Ramsar sites, and limits for acceptable change have been set for the salinity of the Lower Lakes. These in turn introduce a third set of targets to be considered by the operators.

What is Trying to be Achieved by Setting a Salt-Load Target

From a management perspective, the volume of salt in the Basin can be considered infinite. Exporting salt has never been part of any Basin-wide salinity management strategy, and most actions have been directed at reducing adverse saline impacts by keeping salt out of Basin Rivers, either through Salt Interception Schemes or improved catchment management. The proposed salt load target would require both actions (keeping salt out and leaving salt in) to be managed simultaneously.

There is no evidence that the Authority has assessed the management implications of this proposal; nor is there any assessment as to what is meant by *ensuring adequate flushing of salt to the ocean.*

Summary and Implications

A reasonable assessment of the present condition of the Murray at Morgan when recently constructed Salt Interception Schemes and the reduced input of salt to the river are taken into account, suggests that less than 1.760 Mt of salt is now passing Morgan. The Morgan target under the BSMS is being met; but the Authority's salt load target proposed in Chapter 8 would not be met.

The Authority's report on Salinity Operational Targets indicates that this outcome is constant at baseline and at a water recovery scenario of 2,800 GL; and there is no reason to expect these relationships to change rapidly, if at all.

It can be reasonably assumed that when the current flooding fully recedes, the salinity concentration in the Lower Lakes will return to being similar to that at Morgan and will rise to about twice that value with time. The 10 year rolling average of 2 Mt salt load to the sea will not have been met.

When the Murray Mouth closes, the water level in the Lower Lakes will rise, and salinity concentration will increase rapidly, and exceed the Limits of Acceptable Change set under Ramsar.

The likelihood of both the Morgan target and the proposed Salt Load target not being met simultaneously, and hence the *proposed Basin Plan* and Schedule B of the MDB Agreement not being consistent, is of great concern to the Victorian Government. To address this concern, the Victorian Government recommends further investigation into the feasibility and practicality of the proposed salt load target before it is embedded into the Basin Plan legislative instrument.

Likely Impact of Proposals on Existing Water Quality Management Arrangements

Existing arrangements allow for targets to be modified from time to time. There does not appear to be a mechanism to modify targets written into Chapter 8. As a result, targets set in Chapter 8 appear to only be able to be changed through formal amendments to the Basin Plan itself, which are required to be tabled in Federal Parliament and can be disallowed.

Compounding this, the *ANZECC National Water Quality Guidelines* are currently being reviewed through arrangements under COAG's new Standing Council on Environment and Water (SCEW). There is no mechanism proposed under Chapter 8 or anywhere else within the proposed Plan, that would allow the adoption of new or modified targets or processes, to ensure consistency between the Chapter and the outcomes of the SCEW's review.

Given this, the Victorian Government strongly recommends that the MDBA revise its targets to allow for their modification from time to time, in-line with adaptive management approaches. Within this, it is important that the targets closely reflect a key object of the Commonwealth Water Act, which is to 'achieve efficient and cost effective water management and administrative processes in relation to Basin Water Resources' (section 3(g) refers).

Concerns with Water Quality Proposals

As noted under section 2.10 of the submission itself, Victoria's *Environment Protection Act* and *State Environment Protection Polices* (SEPPs) aim to help achieve sustainable surface waters by:

- setting out the environmental values and beneficial uses of water that Victorians want, and the environmental quality required to protect them; and
- setting, within a 10 year timeframe, goals for environmental protection agencies, businesses and communities and the means by which they can be met.

Critically, *SEPPs* describe a framework that sets out a risk based approach to water quality management, that links with catchment plans and licensing arrangements for its implementation, broadly describing:

- How, why and through what processes targets need to be set.
- Policy intent, including mechanisms through which programs will be implemented.
- Definition of area covered, uses to be protected, and objectives and indicators.
- Desired attainment and consideration of practicality, including whether requirements are mandatory or otherwise and if not, what is expected.
- Responsibilities, including for government agencies, industry and community.

As noted in section 2.10 of the submission itself, essentially what the MDBA has done in preparing Chapter 8 is directly transcribe some of Victoria's existing water quality targets, including those under its *SEPPs*, into the Chapter. However, the nature of these targets and what is expected in terms of having to meet them is unclear. This is a critical omission given that the strength of Victoria's existing arrangements is that they are underpinned by a clear, risk-based process, driven by the principle of continuous improvement.

Again, no assessment of how the targets improve on existing arrangements, or the cost of implementing them, has been provided. In addition, the intended benefit for water users and the environment has not been explained.

The Victorian Government's preference is for the protection of water quality to be regulated through a risk-based approach, with targets based on those agreed collectively by Governments through the *ANZECC National Water Quality Guidelines* framework.

Appendix D - Rules for Water Trade

Overview

Chapter 11 of the *proposed Basin Plan* sets out proposed trading rules for the Murray-Darling Basin. This section of the Appendix builds on the discussion provided in sections 2.11 – 2.14 of the submission, and further outlines the Victorian Government's issues with the MDBA's proposals as they currently stand.

Discussion of Specific Issues with Chapter 11

Distinction Between Regulated and Unregulated Systems is Not Practical: The proposed Plan distinguishes between regulated and unregulated systems, without recognising that the concept of 'regulated' is not black and white, but a continuum. Some systems are readily categorised as one or the other, but others are not, and others change their nature between seasons or at different times within a season. Additionally, an 'unregulated system' may comprise only part of a trading zone, while a 'regulated system' can cover multiple trading zones. The proposed Plan must offer sufficient flexibility to deal with these different situations.

Trade Restriction for Environmental Purposes: The Basin Plan should allow a trade restriction to be imposed for environmental purposes. Section 11.17 allows a trade restriction to be imposed if it is necessary because of, inter alia, 'the need to avoid compromising environmental watering requirements'. This reason is too narrow because it may disallow a restriction that is intended to prevent environmental harm.

Bulk and Environmental Entitlements: The Victorian Water Act currently includes limits on the persons to whom these entitlements and their allocations may be traded. These limits are not in compliance with Chapter 11. However, it is reasonable that these limits are placed on these entitlement types which can only held by an 'Authority' under section 34 of the Victorian Act, and which are usually held for public purposes. Chapter 11 should recognise that such entitlements may have limits placed on them.

Tagged Allocation Trade: The potential for more widespread use of tagged allocation trade is starting to be discussed. This trade mechanism may have advantages by reducing third party impacts in some cases. It is important that, if these discussions come to a positive conclusion in the next year or so, that it can be readily accommodated under the Basin Plan trading rules. This may not be possible under the current draft. Tagged allocation trade has strong similarities with a tagged entitlement, and section 11.22 could restrict use of water in a tagged account if ordinary trade of allocation has been turned off in favour of tagged allocation trade. Although the discussion is in its early days, it is important that the trading rules under Chapter 11 of the Basin Plan have the flexibility to accommodate this possible outcome.

Review of MDB Agreement Schedules: A review of Schedule D of the MDB Agreement is currently being undertaken under the requirements of clause 152 of that Agreement. The draft preliminary review has identified a number of inconsistencies between the *proposed Basin Plan* and Schedule D (including its protocols). Under clause 152(2) of the MDB Agreement, the MDBA can recommend to the Legislative and Governance Forum on the Murray-Darling Basin, changes to the Agreement as a result of its review.

It will be important that Basin Ministers be given sufficient time to consider the outcomes of the MDBA's review, and give effect to any decisions that they make in this regard. To ensure ease of transition, commencement dates under Chapter 11 must allow for this. The Victorian Government considers that this matter cannot currently be addressed within the timeframe specified by the MDBA under Chapter 11 of the Plan.

Schedule D of the MDB Agreement is a key component of State water trading arrangements. The relationship between continued operation of Schedule D and the Victorian Government's expectation that existing trade arrangements will be exempt from the Basin Plan until 2019, must be clarified.

Specific Clauses

Section 11.06 – This section of Chapter 11 is currently scheduled to commence on 1 July 2013, and prohibits the Victorian Government's current restriction on allocation trade to individuals that do not hold a water-use licence or water-use registration, and related limits on the volume of allocation that may be purchased and who can hold a limited term transfer.

With relation to section 11.06, a commencement date of 1 July 2013 does not provide sufficient time for the Victorian Government to bring the State's existing arrangements into alignment with the Basin Plan. A more realistic timeframe is needed, in line with the Victorian Government's broader position regarding 2019 commencement of the Basin Plan. This matter is discussed in more detail in section 2.11 of the submission itself.

Section 11.07 - One of Victoria's entitlement types is a 'take and use licence', issued under section 51 of the State's Water Act. As its name implies, this is a licence permitting both take and use of water. As such, it must (with very minor exceptions) be held by an owner or occupier of land. Section 11.07 could conceivably be read as forbidding this sensible requirement. Section 11.07 should be amended to clearly allow trade of these licences to be limited to owners or occupiers of land.

Section 11.20 – This section of the proposed Plan prevents the use of 'exchange rates' to adjust the traded volume other than in certain specific circumstances covered in section 11.21. However, the *Plain English Summary of the proposed Plan* states that this allows the use of an appropriate mechanism to adjust for transmission losses (in a river, or within a distribution system), but this does not appear in the proposed Plan wording. It is suggested that section 11.20 or section 11.21 be modified to cover this situation.

Section 11.39 – This section requires notice to be given to all parties by an authority that is refusing a trade. This is not practical for interstate trades, because the buyer and seller are usually interacting with the approval authority in their respective States. The section should allow the notice to be given through the approval authority in each State.

Appendix E - State Water Resource Plan Requirements

Overview

The Victorian Government does not support the MDBA's proposal (as illustrated in the current draft of Chapter 9) to explicitly document complex water planning requirements, that are likely to require on-going refinement, in a legal instrument that cannot easily be amended. This proposal is at odds with the MDBA's support for an 'adaptive approach' for implementing the Basin Plan, that will allow for change in response to new knowledge or unanticipated events.

Chapter 9 draws together many issues from the other Chapters in the Basin Plan legislative instrument. These issues must be resolved before Chapter 9 can be settled. For example, if agreement cannot be reached on the water quality targets for water-dependent ecosystems, then Victoria would find it unacceptable to take on the obligation of preparing a Water Quality Management Plan that reflects such arbitrary targets.

This Chapter is also inconsistent with the long running, and well understood, Victorian approach to water planning. The Victorian Water Act (1989) does not currently recognise the concept of a water resource plan (WRP) or its equivalent. Therefore, the Victorian Government cannot prepare a WRP as it is defined in the Commonwealth Water Act., Costly amendments to the State's water legislation would be required to give effect to this aspect of the Basin Plan.

To address this gap, the Victorian Government considers that the final Basin Plan should be framed in a way that is consistent with current Victorian legislation. The Victorian Government should not need to undertake a costly process of amending its water legislation to accommodate the Basin Plan's requirements if there are simpler means of meeting the Commonwealth's and the State's needs. One option could include a suite of existing instruments under the Victorian Government's current framework being accredited as WRPs under section 63 of the Commonwealth Water Act.

The Victorian Government continues to have a significantly different view from the MDBA about what action a party needs to take to properly discharge an obligation to 'have regard to' a matter under the Basin Plan – a concept that heavily features in Chapter 9. This matter is considered in more detail in section 3.7 of the submission itself.

The Victorian Government considers that full compliance with this Chapter in its current form (based on the 'have regard to' concept), will impose a heavy additional burden on the State's agencies. The cost of compliance should be quantified and responsibility for funding should be clarified as part of determining the full practicality and feasibility of these proposals, before any final agreement is reached.

Section 1.04 of the *proposed Basin Plan* provides that Chapter 9 commences when the Basin Plan is registered, with the exception of the SDLs (under section 9.13(2)) and some trade arrangements. The Victorian Government has two major concerns with this approach:

- Firstly, the requirements of Victoria's transitional and interim water resource plans (TWRPs and IWRPs) are not resolved, which means that the State's obligations after the commencement of a 'start now' Basin Plan are not clear. The Victorian Government maintains its view that Chapter 9, along with all other Chapters of the Plan, should not formally apply within the State before 2019.

- Even if Victoria's TWRPs and IWRPs are settled (and exemption coverage is obtained), one interpretation of the Commonwealth Water Act is that the State may be compelled to take immediate action to create some form of WRP that covers certain gaps in existing Victorian instruments, for example in relation to the regulation of targets for raw drinking water, as currently proposed under section 8.13 of the draft Plan. This arises from the interpretation of 'inconsistent' in section 245 of the Commonwealth Water Act, and has been the subject of discussions between Victorian and MDBA officials. In response to this matter, the Victorian's Government's preference remains that no aspect of the Plan should commence within the State before 2019, including any additional activities that may arise through Basin Plan provisions that go beyond existing State-based arrangements.

Specific Clauses

Section 9.02 – The Victorian Government is concerned about the description of groundwater WRP areas. The SDL areas in the proposed Basin Plan do not reflect the boundaries of Victoria's existing groundwater management framework and will impede the effective management of groundwater resources. Victoria has requested that the Authority make amendments so that the proposed Basin Plan includes only two groundwater SDL areas in Victoria, one aligned with the Wimmera-Mallee Water Resource Plan Area and the other aligned with the Goulburn-Murray Water Resource Plan Area. Further Victoria is proposing the exclusion of the groundwater resources of the West Wimmera region from the proposed Basin Plan by regulation. Victoria considers these actions will meet the Authority's objectives for groundwater resource boundaries whilst allowing efficient and effective management of the resource at a State and regional scale.

Section 9.07 – The Victorian Government is concerned about the legal implications of this section in the context of southern Basin water sharing arrangements and the MDBA's accreditation process described in Chapter 9. The Victorian Government has similar concerns in relation to section 9.39.

Section 9.11(2) - The purpose of this register is not clear. The Victorian Government considers that any such register should be maintained by either the Bureau of Meteorology (BOM), or the MDBA. It is not clear who would determine what water is 'held environmental water'. Unless specifically tagged for the environment, an entitlement holder can use its water for whatever purpose it chooses. The interaction of this section with reporting requirements under Schedule 10 of Chapter 12 is also unclear.

Related to this, the Victorian Government has concerns about implementation issues relating to boundaries. Environmental water is not linked to land 'areas' and could be contained in the State's bulk entitlements that relate to several systems. It may not be easy (or possible) to attribute existing arrangements to defined WRP areas. For example, Goulburn, Campaspe and Loddon TLM entitlements can be used anywhere on the Murray. The Victorian Government notes that there are also complications with entitlements from the Snowy Initiative.

Section 9.17(c) - A WRP could account for trade of water entitlements; but no avenue exists, such that this could be done while still complying with the proposed approach to SDLs. The anomaly is that section 6.13(1)(a) allows for adjustments for trade of held environmental water but not for other entitlements.

Section 9.22 - Further to comments provided in the Overview about the heavy legal burden implicit in this Chapter, the Victorian Government considers that the 'not compromised' obligation is too onerous. If there is insufficient water to deliver, then 'not compromised' rules will be of little benefit.

This section could imply an obligation to change rules under the MDB Agreement. The Victorian Government would not support any rules under this section that seek to take precedence over rules already established under the MDB Agreement.

In relation to section 9.22, the Victorian Government considers that the MDBA must clarify how this section reflects the intent, as is provided in section 3(c) of the Commonwealth Water Act, that equal consideration must be given to social and economic needs.

Sections 9.23 and 9.24 – as with section 9.22, the Victorian Government is concerned that the condition to 'ensure ... environmental water requirements are not compromised' is too onerous.

Sections 9.28 to 9.30 - Consistent with the general comments above, the Victorian Government has significant concerns about the practicality and implementation costs of these sections. The Victorian Government currently does not closely monitor interceptions, and the MDBA's proposals in this regard appear to offer little benefit for the large cost of implementing them. As for other sections of this Chapter, the cost of compliance should be quantified and responsibility for funding should be clarified as part of determining the full practicality and feasibility of these proposals, before any final agreement is reached.

Related to this, under the MDBA's proposed arrangements, States will either have to regulate interception activities (which in general they do not have powers to do) or decrease allocations to entitlement holders (which would decrease reliability). The Victorian Government is concerned that there appears to be no compensation coverage for such action, as it would be treated as a choice of the State about how to meet its SDLs. The Victorian Government understands that such changes would not fit under the 'change in reliability' restrictions in section 9.09 because these relate to SDL compliance (i.e. covered under section 74 of the Commonwealth Water Act).

Section 9.33 – The Victorian Government questions the need for this specification when there is already protection of SDLs. This would restrict a State from creating an entitlement from planned environmental water (i.e. even for the purposes of creating an entitlement for held environmental water) when it might be sensible and beneficial to do so.

Section 9.36 – The Victorian Government does not support these targets. More detail can be found in sections 2.6 – 2.10 of the submission itself.

Section 9.37 – Page 39 of the *Plain English Summary to the proposed Basin Plan* clearly states that targets are aspirational. Section 9.37 does not make this clear. This section should be altered to clarify that targets are aspirational and that the requirements in section 35 of the Commonwealth Water Act won't apply if targets are not met.

As currently drafted, this section requires that consideration be given to measures that will meet the targets. Given the breadth of targets, this will be difficult and costly to undertake. In addition, item 15 of schedule 10 to Chapter 12 uses these targets as a measure of progress in implementing the Basin Plan.

Largely driven by the MDBA's approach in setting them, It is unlikely that the Victorian Government would be able to consistently meet these targets, and so it does not support this proposed approach. The Victorian Government will not agree to a provision that is so impractical that it essentially sets the State up for failure before the Plan has even formally commenced.

Section 9.37(3) – It is unclear why this section has been included, especially given it appears to go beyond the scope of the Commonwealth Water Act. Beyond this, regulating conditions on land management is rare within Australia and, where they have been applied, history shows that they have been vigorously opposed by affected third parties. Reference to such matters in this section could lead to substantial implementation risks and community opposition.

Section 9.45 – The approach in this section appears similar to that of the former Murray-Darling Basin Commission. This high level, formulaic approach required considerable resources and provided little practical benefit. The various elements of water planning in Victoria already build in risk assessments and provide a more efficient solution than what is proposed in this section. As a result, it should be deleted from Chapter 9.

Sections 9.49 and 9.50 – These sections relate to the MDBA's proposed requirements in relation to measuring and monitoring. More generally, as considered in sections 3.5 and 3.9 of the submission itself, the Victorian Government is concerned that monitoring and reporting requirements under the Basin Plan as a whole will have a high cost impact. Sections 9.49 and 9.50 of Chapter 9 provide further examples of this general concern about the additional administrative burden, and cost of complying with the Basin Plan.

Sections 9.51 and 9.52 – It is not clear to the Victorian Government why these sections are required in addition to section 65 of the Commonwealth Water Act.

Section 9.55 – The Victorian Government maintains its view that there is no sensible rationale for, or value to be derived from, this requirement. These matters should continue to be left to States to deal with. There is no useful role for the MDBA in this area.

Section 9.56 – 9.59 – These sections provide water resource planning requirements related to Indigenous values and uses. Section 3.4 of the submission itself outlines in broad terms, Victoria's concerns with these provisions.

Appendix F - The Role of Government in Assisting Structural Adjustment

Overview

As noted in section 3.10 of the submission, a transition policy for the Basin Plan is needed. The Basin Plan is a Commonwealth Government reform, and as such the Commonwealth has primary responsibility for funding any additional transition policies and programs needed as a result of the Plan. However, other levels of Government have a crucial role to play in the design and implementation of programs and policies at the regional and local level. The following are examples of the role Governments can play in assisting structural adjustment.

Improved Information

There is a role for Government in facilitating adjustment by providing information that may otherwise not be made available. Ideally, such information should be targeted at those without the resources to obtain or understand it themselves.

It is critical as a first step that the Authority and the Commonwealth clearly and fully articulate how the Basin Plan will affect water availability/reliability for productive uses and allow individuals and businesses in the Basin to make informed decisions about their future.

The provision of business planning and counselling services will also be essential for disseminating information and providing businesses with the capacity to make appropriate decisions about their future – be it to exit, continue or adapt their business models. The focus should be on finding services that would otherwise not be provided (at least at reasonable cost) by the private sector.

Skills

Governments can facilitate adjustment by ensuring that those who are adversely affected by the Basin Plan have the opportunity to learn new skills or obtain recognition of their existing skills.

A 'one size fits all' approach to re-skilling will not work. As considered in detail in the submission itself, the Basin Plan will not have a uniform impact across all areas of the Basin, and areas will have different needs for re-skilling. At an individual level, those who exit the irrigation industry through farm sales or job loss will have different needs to those who decide to stay in irrigation and adjust, or those who work in related manufacturing and service industries. Any skills programs should be informed by the likely needs of the future workforce in affected areas.

In implementing a skills package, Government may need to consider whether additional places and funding are required for existing training courses, or whether the current system is capable of delivering the services required.

Broader Support Services

The Commonwealth Government has a role to ensure that appropriate support services are in place, preferably prior to the implementation of the Basin Plan, to help impacted individuals cope with change. The recent drought highlighted the importance of health, mental health and counselling services in periods of high stress.

Where services already exist, the Commonwealth Government should focus on ensuring individuals have information about available services, and ensuring that these services are appropriately resourced. Other situations may require additional location specific, targeted and flexible support services to assist communities with the transition process.

Research, Development and Extension (RD&E)

RD&E effort on water efficiency in agriculture in the Basin should be increased. The Basin Plan will result in a reduction in water available for productive use, increasing the importance of future water efficiency and productivity in agricultural production. There is also a role for Government to encourage research on tools to facilitate adjustment in the Basin. Examples of such research may include:

- New ways to easily transition farms from irrigation to dryland farming.
- Water entitlement and trade products, and tools for managing variability in water supply, and supporting environmental outcomes.
- Development of ecosystem services markets to enable diversification of business models and regenerate non-productive land.

Investments in RD&E will help maintain the viability and competitiveness of the Basin's irrigation sectors and associated manufacturing industries. By increasing on-farm productivity levels, RD&E should help offset the reduction in irrigated agricultural production and commensurate effects on downstream producers and local communities.

Government Policy Barriers to Adjustment

In the context of the Basin Plan, it will be important for all Governments to consider whether current frameworks in related policy areas act as barriers to efficient structural adjustment. While it will be important to extensively review policy frameworks, examples of such barriers may include taxation (e.g. capital gains tax, stamp duty), planning rules around the appropriate use of agricultural land, and rules that reduce the tradability of water rights.

The opportunity exists for States to work with the Commonwealth to reduce these barriers if measures are properly targeted and do not leave States worse off financially.

Strengthening and Diversification of Local Economies

The Commonwealth Government potentially has a role in assisting business, industry, local government and community development in response to the Basin Plan. This can involve a number of interventions, such as investment in human capital, enabling critical infrastructure (e.g. transport and communications), targeted investment in further efficiency and innovation or building community resilience through flexible, place based investment that builds on existing regional competitive advantages.

This suggests strengthening and diversification within affected communities will play a key role in successfully mitigating the impacts of change.

As an example, established in 2010, the *Latrobe Valley Advantage Fund* is a program designed to increase regional capacity to adjust to changing circumstances associated with introduction of a carbon price by the Commonwealth Government.

Victoria's Latrobe Valley is expected to be significantly impacted by the introduction of a carbon price. Like the issues facing many irrigation communities, the structural adjustment task facing the region is well recognised and increasing regional capacity to adjust to changing circumstances is considered a key component of any response.

The adjustment response is being collectively developed with local stakeholders in the Latrobe Valley and is underpinned by an Agreement between the Commonwealth and Victorian Governments, supported by the region's Local Government bodies. The Agreement outlines support for the Latrobe Valley to transition to a more diversified economy, and establishes a robust governance framework including all levels of government and key local organisations. This acknowledges that a collaborative approach to structural adjustment is the most effective means to achieve a transition.

This approach aims to integrate investment planning by Governments, based on evidence, to support the region's longer term economic diversification for industry and employment growth. The same principles and approach can be applied to Basin communities facing significant structural adjustment challenges.