

Australian Greens

Minority Report – The Management of the Murray Darling Basin

1.1 The establishment of a Murray Darling Basin Plan will be a crucial reform in Australian history and it must ambitiously seek to correct the decades of over-allocation from the Basin system. The final Basin Plan must address the long-existing environmental crisis of over-consumption and restore the river's health for the benefit of communities, local economies and ecological resources up and down the system. The reforms must achieve a healthy, productive and resilient river and land network that can survive dry times and flourish over future generations.

1.2 The Committee heard evidence in a number of hearings from scientific experts, individuals who are experienced in the management of Australia's precious water resources, and industry and community representatives. The Committee looked at three different iterations of the Murray Darling Basin Draft Plan over the course of the inquiry. The submissions and evidence given to the Committee are summarised in the Majority Report.

1.3 This Minority Report identifies the Australian Greens' analysis of the key concerns raised by submitters in relation to the proposed Draft Plans over the course of the inquiry, including the most recent version released in August 2012.

Surface Water - Sustainable Diversion Limits (SDLs)

Lack of transparent identification of SDLs target based on best available science

1.4 The Draft Plan proposes a reduction in consumptive use of water by 2750 GL/y. This figure is not adequate to achieve the majority of targets required by the Water Act for a healthy working river. The 2750 GL/y of environmental flows fails to achieve 43% of the Act's environmental targets, and so does not deliver a healthy river.¹

1.5 Expert witnesses appearing before this inquiry noted that the Murray Darling Basin Authority (MDBA) did not, as a first step, clearly identify and publish the volume of water that is needed to keep the system healthy as informed by the best available science in accordance with the *Water Act 2007*. This failure of scientific process has dogged the Draft Plan through its various iterations.

1.6 Mr Tim Stubbs, of the Wentworth Group, raised concerns that the requisite scientific steps have not been taken by the MDBA in the development of the Draft Plan:

First we need a plan that clearly articulates how much water we need for a healthy Murray Darling Basin. This plan does not do that, so we need a plan

1 Australian Conservation Foundation, *Modelled Ecological Outcomes of the Proposed Basin Plan 2750 SDL Scenario*, document tabled, 10 September 2012.

that sets that number down as the science is based. We need to understand where that water needs to come from, which share comes out of each catchment and what contributions to the downstream flows are needed.²

1.7 A higher range of return of environmental water scenarios, including with major constraints relaxed, should immediately be modelled and released so the Australian public can understand the scope of environmental achievement at each level.

1.8 Once the range of possibilities is clear, an informed decision can be made. Socio-economic and other considerations could mean we do not pursue the highest return of environmental water scenario, but the Australian public could have confidence that the decision has been made on the best information. The modelling technology possessed by the MDBA is capable of providing clear evidence of the environmental outcomes under different water return scenarios. In all the evidence given to this inquiry, it is still not clear why the MDBA has never modelled higher ranges, including 4000 GL/y, as requested by numerous groups including the Australian Greens.

1.9 A 4000 GL/y water recovery has long been posited, by the best available science, as the minimum amount to be recovered in order to sustain a health river. If federal Parliament is to be asked to agree to a figure that is less than 4000 GL/y, then it is beholden on the MDBA to transparently provide the full modelling for both 4000 GL/y and for lower scenarios in order to map out the environmental trade-offs as the level of ambition drops.

2750 GL/y is inadequate

1.10 The witnesses appearing for the Wentworth Group advised the committee that the Draft Plan is inherently flawed because it does not provide the modelling and explanation for why 2750 GL/y has been settled on as the proposed surface water reduction of consumptive take. Mr Peter Cosier said 'our primary concern is that Parliament is not being provided with the scientific evidence on which to make an informed decision'.³ Dr John Williams expressed the concerns of his 'horrified' scientific community that 'we are going to spend a lot of money without the best knowledge applying to what this river system needs. In addition to that, we are not using the best economics and social science to know how to help the people of this basin adjust to the huge task of adjustment'.⁴

Modelling without constraints

1.11 The Committee was advised that there is much still to be done to investigate how system constraints may be overcome and incorporated into the long term Basin

2 Mr Tim Stubbs, environmental engineer for the Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 10.

3 Mr Peter Cosier, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 14.

4 Dr John Williams, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 14.

Plan. Mr Jonathan La Nauze of the Australian Conservation Foundation said 'we have been told a giant fib about constraints—specifically, the notion that you cannot deliver a drop more than 2750 GL/y of environmental water down the river without flooding a town or a bridge somewhere'.⁵ There are different types of constraints in the system including physical constraints like dams or bridges, operational constraints and constraints caused by rules about water use. There are also many possibilities for tackling these diverse constraints up and down the system. The Basin Plan should be seen as a trigger to work creatively to remove those constraints and aim for higher water delivery, but instead, the mere existence of constraints has apparently put a hard ceiling on the Draft Plan's level of scientific inquiry and ambition.

1.12 The MDBA should model and release higher volume scenarios with major constraints removed. The constraints management strategy must include the cost and feasibility of overcoming river management infrastructure constraints so that environmental flows can be delivered downstream.

Recommendation 1

The Australian Greens recommend that the MDBA model several alternative scenarios above 2750 GL/y including 4000 GL/y and above, *with major system constraints removed*. All relevant results (including the allocation of different water types) from the modelling must be publically released. The CSIRO must be commissioned to review the effectiveness of each scenario to satisfy the Water Act's required ecological outcomes.

Recommendation 2

The Constraints Management Strategy should be provided to Parliament for consideration prior to the tabling of the final Basin Plan by the Minister so that Parliament may make an informed decision.

Environmental outcomes for South Australia

1.13 The MDBA has presented a series of draft plans that only investigate a lower range of water to the environment. The low ambition is likely to have a very detrimental effect on South Australia. 2750 GL/y will be insufficient to fulfil Australia's Ramsar Convention obligations and would fail to maintain the ecological character of South Australia's internationally significant wetlands.⁶ More than half the ecological targets of the Coorong will not be reached under the current Draft Plan, which will lead to dangerously high salinity in the Northern Coorong.⁷ Many of the

5 Mr Jonathan La Nauze, Healthy Rivers Campaigner, Australian Conservation Foundation, *Committee Hansard*, 10 September 2012, p. 20.

6 Australian Conservation Foundation, *Modelled Ecological Outcomes of the Proposed Basin Plan 2750 SDL Scenario*, document tabled, 10 September 2012, p. 2.

7 Australian Conservation Foundation, *Modelled Ecological Outcomes of the Proposed Basin Plan 2750 SDL Scenario*, document tabled, 10 September 2012.

ecological targets in the Riverland-Chowilla Ramsar site will also not be met under the 2750 GL/y scenario, and the rest are only satisfied to a high level of risk.

1.14 For the sake of South Australia and in pursuit of economic responsibility for these \$9 billion reforms, the Basin Plan must deliver more than a merely moderate improvement on our current disastrous water usage scenario. The Basin Plan must strive to achieve, as a priority, adequate water for all states *even in dry conditions*. South Australia, as the most water efficient state and the state most exposed to environmental disaster in times of low flow, needs certainty that this investment will deliver security in the times of extremity and plenty.

Recommendation 3

The Basin Plan must set appropriate salinity targets and provide for a minimum annual allocation of environmental water for the Coorong, Lower Lakes and Murray Mouth including during dry periods.

Groundwater and Climate Change

1.15 The Guide of the Draft Plan in October 2010 anticipated that climate change and a drying climate would have a significant effect on the Murray Darling Basin water resources. However the current version of the Draft Plan does not make any provision for climate change modelling and impacts, particularly relating to water run-off. The Majority Report provides an overview of the evidence provided to the Committee.

1.16 In relation to the groundwater SDL, the MDBA has proposed four different figures for increased extraction over the course of two years. The proposed groundwater SDLs lurched from 1601 GL/y, to 4340 GL/y, to 3184 GL/y and in the most recent version to 3324 GL/y, with all but the first target representing a substantial increase in extractions. The MDBA's evidence before the Committee did not explain these changes to the groundwater SDL.

1.17 Given the lack of complete knowledge about the interaction of groundwater and surface water, and the connection across catchments and aquifers, it is difficult to understand how these large jumps have been scientifically justified. In line with a precautionary principle in a drying time and in light of the whole point of the water reforms being undertaken, the Greens support the view of the Conservation Council SA that 'by default, these systems should be treated as connected'.⁸

Recommendation 4

The Basin Plan should not increase groundwater extraction unless it can demonstrated on a case by case basis, with independent scientific assessment of connectivity and ecological outcomes, that the proposed increase in extraction is sustainable and justified.

8 Mr Tim Kelly, Chief Executive, Conservation Council of SA, *Committee Hansard*, 24 April 2012, p. 24.

Recommendation 5

The Basin Plan must incorporate climate change modelling as forecast by the best available scientific data.

SDL Adjustment Mechanism and Infrastructure Spending

Inadequate benchmarking and locking in failure

1.18 The Greens note that the current SDL adjustment mechanism will set as its benchmark the inadequate environmental outcomes achieved under the 2750 GL/y water recovery scenario. This sets up any future adjustment of the Plan in later years for failure because even the highest possible adjustment for further environmental water returns will be damagingly constrained by its unambitious beginnings in 2012.

1.19 The adjustment mechanism as currently proposed would benchmark against a Plan that does not return enough water to even meet the full range of flow targets described by the MDBA itself as achievable under current operating constraints. Work will continue over the next six years on removing constraints, improving water efficiency and undertaking works and measures, while our scientific knowledge about groundwater/surface water connectivity and climate change will improve. As such, the adjustment mechanism should not bind the Plan to 2029 by placing an unreasonably low ceiling on future environmental achievement.

1.20 The Australian Greens share the concerns raised by submitters about the allocation of water savings being shared between socio-economic use and environmental use. The adjustment mechanism is focused on either upgrading irrigation infrastructure or in-stream works and measures. Given that both supply measures and efficiency measures will be paid for by the tax-payer, any water saved should go back to the environment which will ultimately benefit all States and communities.

Prioritisation of infrastructure spending

1.21 The adjustment mechanism requires that any further water recovery above 2750 GL/y must occur through infrastructure spending. The Committee was advised that buy backs offer better value for money than infrastructure per GL delivered back to the environment.

1.22 Mr Tim Stubbs noted, 'if you were to get 4000 [GL/y] you could buy that with about \$6 billion and you would still have a significant amount of money left over to help regional communities adjust to that change'.⁹

1.23 Similarly Mr Jonathan La Nauze observed that any future decrease to surface water SDLs, which by then could be necessary due to the drying climate, will be expensively bought by the Australian public under the current adjustment mechanism:

The mechanism can also be used...to recover extra water for the environment, but only through what the authority calls 'efficiency

9 Mr Tim Stubbs, Environmental Engineer, Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 11.

measures'—that is, expensive upgrades to irrigation infrastructure, whether on farm or off farm. It effectively rules out extra buybacks, putting the brakes on water reform and constraining the hand of future governments.¹⁰

Recommendation 6

The adjustment mechanism should be structured to better accommodate the removal of constraints and to facilitate a future decrease in SDLs but not to facilitate any less water being returned to the river.

Recommendation 7

The adjustment mechanism should be altered to facilitate and encourage future buybacks where they are strategic and voluntary as buybacks are proven to be the most cost-efficient and secure manner of recovering water from consumptive use.

Conclusion

1.24 The Australian Greens heard an overwhelming sense of dissatisfaction from virtually all key groups of stakeholders with the Basin Plan.

1.25 The environmental groups that provided evidence to the committee, such as the Australian Conservation Foundation, the Friends of the Earth, and the Inland Rivers Network all expressed serious reservations about the plan in its various iterations. Most recently, the ACF summarised the fundamental flaws with the plan. As Mr La Nauze put it:

...does it deliver a healthy river, and does it represent a good and proper use of taxpayers' money? You would have to say the latest version falls short on both counts.¹¹

1.26 The committee received evidence from a number of scientists who have worked extensively on issues relating to the Basin Plan. Of particular note were representatives from the Wentworth Group and the CSIRO who provided evidence critical of various aspects of the plan. The CSIRO, which extensively examined MDBA material in the lead up to its review of the science behind the Environmentally Sustainable Level of Take (ESLT), identified significant shortcomings in the 2800 GL/y scenario in reaching environmental targets and objectives.¹²

10 Mr Jonathan La Nauze, Healthy Rivers Campaigner, Australian Conservation Foundation, *Committee Hansard*, 10 September 2012, p. 20.

11 Mr Jonathan La Nauze, Healthy Rivers Campaigner, Australian Conservation Foundation, *Committee Hansard*, 10 September 2012, p. 20.

12 Young WJ, Bond N, Brookes J, Gawne B and Jones GJ, *Science Review of the estimation of an environmentally sustainable level of take for the Murray-Darling Basin*. A report to the Murray-Darling Basin Authority from the CSIRO Water for a Healthy Country Flagship, November 2011, p. 30. The CSIRO examined the impacts of returning 2800 GL/y rather than 2750 GL/y as its analysis was based on the modelling undertaken by the MDBA (which modelled 2800 GL/y) rather than is recommended reduction of 2750 GL/y.

1.27 The Wentworth Group was even more damning. As stated earlier in this Minority Report, the Wentworth Group considered key aspects of the plan to be without scientific justification.¹³

1.28 The crux of this Minority Report has been to outline that there are serious flaws in the assumptions used for the Basin Plan and the significant information gaps that remain for key parts of the Basin Plan.

1.29 The Australian Greens are of the view that the MDBA has not adequately explained the reasoning for the 2750 GL/y figure, has not conducted enough independent peer review, has not based the Draft Plan on best available science, has not included the effects of climate change in its modelling, and has relied on flawed assumptions regarding surface and ground water connectivity.

1.30 Taken together, the Australian Greens are of the view that these information gaps do not allow parliament to make informed and considered judgements about the merits of the Basin Plan to achieve the objectives required under the *Water Act 2007* and therefore cannot deliver good public policy for the Basin and its constituents.

Senator Sarah Hanson-Young
Australian Greens

Senator Peter Whish-Wilson
Australian Greens

13 Wentworth Group of Concerned Scientists, *Committee Hansard*, 10 September 2012, p. 14.

