



# National Irrigators' Council

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## Submission to the “Guide to the Proposed Murray Darling Basin Plan”

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## **Introduction**

The National Irrigators' Council (NIC) is the peak body representing irrigators in Australia. The NIC's objective is to develop projects and policies to ensure the efficiency, viability and sustainability of Australian irrigated agriculture and the security and reliability of water entitlements. NIC currently has 29 member organisations covering a variety of states, regions and commodities.

While this document has been prepared by the NIC, each member reserves the right to independent policy on issues that directly relate to their areas of operation, or expertise, or any other issues that they may deem relevant.

## Overview

The National Irrigators' Council welcomes the opportunity to provide input to the Guide. We will attempt through this submission to highlight deficiencies in the Guide with respect to policy decisions, science, data and assumptions and highlight areas for improvement. Our intention is to ensure these deficiencies are addressed in the proposed Basin Plan.

We make clear from the start that we reject the proposals outlined in the Guide as unbalanced and detrimental to our members, our communities and the wider Australian population.

Irrigators are, and have been, willing to play their part in the water reform process to ensure we have healthy ecosystems, sustainable food production and strong regional communities in the Basin. One of the reasons that irrigators have been supportive of the water reform process is the National Water Initiative's prescription that management of surface and groundwater resources should "optimise economic, social and environmental outcomes".<sup>1</sup> This is replicated in the objectives of the *Water Act 2007* (at 3 c) but is not reflected in Section 21 of the Act and as such, neither is it a feature of the Guide.

NIC believes that if we are to have a truly inclusive reform process that optimises environmental, social and economic outcomes, there must be trade-offs for all three. The Act and the Guide give primacy to the environment to the detriment of social and economic outcomes and as such we believe they fail our communities and the nation.

In our view, the proposals outlined in the Guide to remove between 3000 and 4000 GL from the productive pool would devastate many of our communities and threaten the viability of some of our irrigation industries.

We would like to express at the outset our frustration with the process undertaken both by the MDBA and the wider Government. The process has been drawn-out, opaque, confusing and ultimately damaging for our members and their communities. The nature of the process has breached trust with industry and jeopardised support for reform. The MDBA and the Government have considerable work to do to rebuild any semblance of that trust.

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<sup>1</sup> National Water Initiative, para 23

### **Summary of recommendations**

These recommendations relate to specific issues raised in this submission requiring a response from the MDBA and should not be seen as a compendium of the only issues that need to be addressed in the Guide.

**Recommendation 1a:** That the MDBA immediately release any legal advice it has relied on in preparing the Basin Plan pursuant to the *Water Act 2007*.

**Recommendation 1b:** That the MDBA advise the Government of the need to amend the *Water Act 2007* to provide equal consideration of social, economic and environmental outcomes to ensure compliance with the National Water Initiative.

**Recommendation 1c:** That the MDBA advise the Government of the need to place a focus on and/or amend the *Water Act 2007* to adequately consider non-flow related environmental problems throughout the Murray-Darling.

**Recommendation 2:** That the MDBA produce a list of recommended environmental works and measures projects, along with indicative costs, water savings and environmental outcomes, for consideration by governments.

**Recommendation 3:** That the MDBA clearly advise Government that it cannot be sure of achieving environmental outcomes based on the “best available science” and that current programs such as Water for the Future (current forward estimates programs), The Living Murray and Water for Rivers be allowed to proceed and then assessed for measurable outcomes before additional water recovery is pursued.

**Recommendation 4:** That the MDBA clearly explain where judgement has been used in finalising decisions and fully justify how it arrived at such judgements.

**Recommendation 5:** That the MDBA use wider measures of river health than just hydrology and solutions other than “just add water” must be provided.

**Recommendation 6:** That future work by the MDBA in assessing the social and economic impacts of the Basin Plan focus specifically on the local, regional and short-term impacts, rather than those of a Basin-wide or national scale and in the long-term.

**Recommendation 7:** That the MDBA provide a scientific justification for the use of 60-80 per cent of natural end-of-system flows as its main indicator of environmental health, including alternative measures that were considered and rejected.

**Recommendation 8a:** The MDBA should advise governments that interception activities need to be fully accounted for in water accounts and that any interception regarded as take should be licensed and entitlements to reflect that licensing purchased in the open market.

**Recommendation 8b:** That the MDBA explain how it will improve estimates of interception activity.

**Recommendation 9:** That the MDBA undertake further work on the potential for flood inundation of private land if its recommendations are followed and explain how the risk and legal issues of such events is to be managed.

**Recommendation 10: That the MDBA work with other government agencies to compile all of the water available to be used as offsets and indicate the volume of water previously recovered that has already been included in the current diversion limit calculations.**

## Comments on process

The strong reaction of Basin communities to the release of the Guide is not surprising given for many people in the Basin, this was the first they had heard about the Basin Plan. In our view, an inclusive and consultative process would have been completely different. We believe the MDBA should have started the development of the plan by going to regional communities to:

- a) Outline the “problem” – many stakeholders do not accept or understand that there is a long-term problem with the health of the system
- b) Provide provisional advice as to the possible numbers to be contemplated in the Plan (such as the “range” that was ultimately released)
- c) Discuss possible solutions to returning the rivers to health, including alternatives to current government programs; and
- d) Ensure the community is engaged *before* any recommendations were made.

While we acknowledge that the MDBA was present at various Departmental and other information forums in the Basin, there was little information of substance ever provided and the Basin Community Committee has been so shrouded in secrecy and confidentiality agreements as to be almost pointless.

NIC has long argued for the MDBA to “get the balance right” between the needs of the environment and the needs of food and fibre producers and regional communities. We have accepted that this may require additional time to that outlined in political agreements.

However the three delays to release of the proposed Plan – and ultimately the decision to issue a “Guide” instead have stretched our patience. We were most displeased that the Guide was deliberately delayed until after the Federal Election. There was no legitimate justification for this action (it was patently not in breach of the caretaker convention and the Authority’s refusal to release its legal advice on this issue appears to confirm the fact) and it was in our view a deliberate subversion of the democratic process.

The timing of the release of the Guide (at 4 pm on a Friday) was poor and appeared to be a deliberate attempt to avoid media and stakeholder scrutiny. The justification of this decision on the grounds of potential impacts on publicly listed companies was manifestly inadequate. The fact the Authority then chose the same time and day of the week to release volume two (and more recently to announce it was extending the time for comment) only added insult to injury and treated stakeholders with contempt. Such action was not open and transparent and built the impression among stakeholders that the MDBA had “something to hide”.

Most egregious of the problems however was the failure to release all volumes of the Guide at the same time. After 12 months or more of being left in the dark on the science and the numbers, we finally got just the numbers, with no science or data to back them up. That it took a further two weeks for volume two to be released, and then nearly a month for the accompanying appendices was appalling, particularly given that the consultation process was well underway (or almost complete) by then. We are still awaiting the volumes providing detailed information for each of the 19 catchments and indications are these will now not be produced.

In this context it is rather galling and somewhat disingenuous that volume 2 of the Guide advises the reader that “further information will also be available from peak bodies”<sup>2</sup>. It’s a bit rich to send people to us for more information when it hasn’t provided it to us in the first place.

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<sup>2</sup> Guide to the proposed Basin Plan, Vol 2, pg 7

## **The failings of the Water Act 2007**

*“The way in which the Act is framed leads to this sort of result, which is ‘we have to do this for the environment and you’re gonna have to suck it up and live with it’. Now this cannot be a viable point, you have to find a reasonable balance between this.”<sup>3</sup>*

- Professor John Briscoe, Harvard University, World Bank Senior Water Adviser, International Adviser to the MDBA

NIC has long made known its concerns about the *Water Act 2007* and we accept that this is not something directly in the power of the MDBA.

Minister Burke and the Government have made it clear that the MDBA must take a triple bottom line approach in the Basin Plan. Advice from the Australian Government Solicitor released by Minister Burke is open to interpretation. However, as we have seen no other advice to the contrary, we expect the MDBA to rewrite the Guide based on this interpretation. If, has been stated publicly by the Chair, the MDBA has alternate legal advice on how it should implement the Basin Plan then it must be released. If there is continuing conflict in respect to such advice then the MDBA should recommend the Act be changed to avoid confusion and remain in concert with the NWI (see Recommendation 1b, below).

**Recommendation 1a: That the MDBA immediately release any legal advice it has relied on in preparing the Basin Plan pursuant to the *Water Act 2007*.**

The National Water Initiative, agreed by the Commonwealth, all states and industry in 2004, and the foundation of ongoing water reform, committed this nation to a triple bottom line outcome from water management – one that “optimises economic, social and environmental outcomes”<sup>4</sup>.

It went further to say there was a continuing imperative to “increase the productivity and efficiency of Australia’s water use, the need to service rural and urban communities, and to ensure the health of river and groundwater systems...”<sup>5</sup> and that “...settling the trade-offs between competing outcomes for water systems will involve judgements informed by best available science, socio-economic analysis and community input...”<sup>6</sup>.

It was these principles of balance, trade-offs and equal consideration of environmental, social and economic considerations that irrigators welcomed and was the reason they supported, and continue to support, the NWI as the basis for water reform. Unfortunately, in our view the Act fails to maintain that holistic approach and as the foundation for the Basin Plan, it is not surprising that we now have a proposal that does not deliver balance.

In our view, the current Act is biased to the needs of the environment given its reliance on the external affairs powers to achieve a head of power under the Constitution. The external affairs powers focus wholly on delivering the needs of the environment in order to meet our international treaty obligations. We do not claim that there is no consideration of social and economic impacts, but under the Act they are only considered “subject to” the delivery of the environment’s needs.

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<sup>3</sup> Excerpt from interview, ABC Radio National Breakfast, 4 November 2010

<sup>4</sup> Intergovernmental Agreement on a National Water Initiative, para 23

<sup>5</sup> Ibid, para 5

<sup>6</sup> Ibid, para 36

Our position has been publicly supported by a number of legal minds, including Constitutional law expert Professor George Williams of the University of NSW<sup>7</sup> and Sydney Barrister Josephine Kelly<sup>8</sup>.

NIC believes that in order to deliver on the triple-bottom-line promise of the NWI and deliver a balanced Basin Plan, the Act must be amended. We do not think it is beyond the remit of the Authority to provide such advice to the Government.

**Recommendation 1b: That the MDBA advise the Government of the need to amend the *Water Act 2007* to provide equal consideration of social, economic and environmental outcomes to ensure compliance with the National Water Initiative.**

A second concern of the Act, and indeed the entire Basin reform process, is the focus on water and flow alone as a solution to the environmental problems of the river system. Indeed, the Act specifically precludes the Basin Plan from dealing with “land use or planning, management of natural resources other than water and control of pollution”<sup>9</sup>.

This is a repudiation of some 30 years of integrated catchment management in this country that has acknowledged that management must extend to matters such as land use, riparian vegetation, noxious weeds, invasive species and foreign fish species such as European carp.

It is simply not possible to address all the environmental problems of the Basin by using flow as the only remedy. “Just add water” is not a solution to a complex problem. For further discussion, see the section later in this paper on the Sustainable Rivers Audit.

**Recommendation 1c: That the MDBA advise the Government of the need to place a focus on and/or amend the *Water Act 2007* to adequately consider non-flow related environmental problems throughout the Murray-Darling.**

### **Environmental Works and Measures**

NIC is disappointed at the scant regard paid to environmental works and measures as a source of both water savings and alternative environmental outcomes.

NIC, the National Farmers’ Federation and the Australian Conservation Foundation have previously approached the Authority seeking further development of such proposals as a part of a suite of measures to address environmental needs. Our calls have largely fallen on deaf ears.

The MDBA, through its predecessor the MDBC, has put considerable effort into such works and measures through programs such as The Living Murray. It clearly has the necessary capacity to bring forward a suite of projects that could be considered for funding (and estimates of cost) and the estimates of the available water savings and/or environmental outcomes from such projects.

Such savings could play a significant part in offsetting the impacts of new SDLs on basin communities.

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<sup>7</sup> “When water pours into legal minefields”, Sydney Morning Herald, October 26, 2010

<sup>8</sup> “The river’s needs are the only consideration”, Australian Financial Review, November 16, 2010

<sup>9</sup> *Water Act 2007*, Section 22 (10)



Ideally, the MDBA should be able to advise government on the options available to it. To give a hypothetical example: “The SDL for the entire Basin is 9,200 GL, but with the full implementation of the attached works and measures projects at a cost of \$750 million, the SDL could be 10,000 GL”.

NIC is working with State Governments and other organisations to bring forward prospective projects to the Commonwealth for consideration.

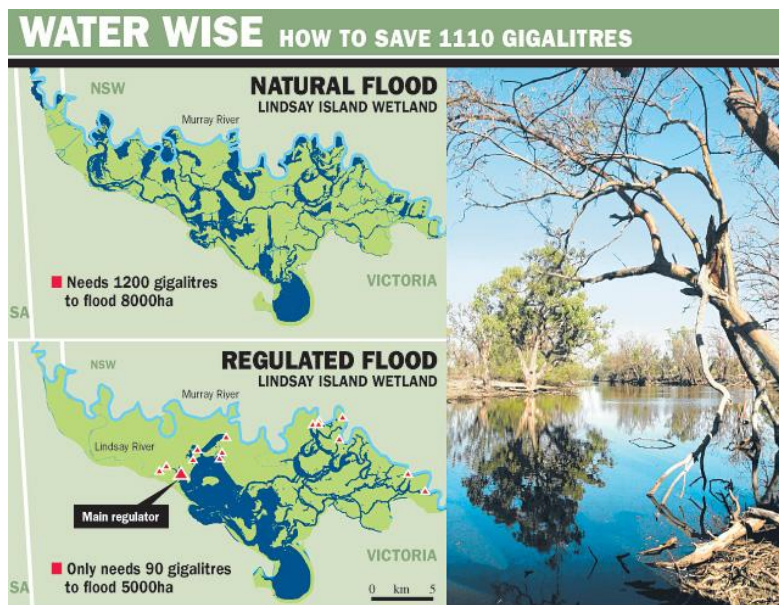
As an example of the works that could be undertaken, we cite the following from the Victorian Government:

*Works at Lindsay Island will enable flooding of 30 per cent of the floodplain (about 5,000 ha), and reduce the amount of environmental water required for each event from 1,200,000 ML to 90,000 ML. To purchase allocation on the temporary market and provide this difference – just once – would cost around \$200 million. To purchase high-reliability water share and provide it more permanently would cost over \$2 billion.<sup>10</sup>*

The Victorian Government estimates the cost of these works (installation of a weir on the Lindsay River and eight smaller regulators to retain water on the floodplain – see graphic) at \$36 million. The works would enable flooding of river red gum communities, permanent and semi-permanent wetlands and provide permanent habitat for fish, turtles and frogs (including the endangered Growling Grass Frog) as well as increased breeding opportunities for water birds including species listed under international treaties.

This is a perfect example of a project that can deliver an environmental outcome for significantly less water and at far less cost than purchase of entitlements.

In our submission, the entire reform process has ignored this type of approach for too long, focussing more on buybacks of entitlement which suck the wealth out of many of our communities. By investing in more efficient environmental watering outcomes, the Government can deliver on its environmental objectives while limiting the damage to regional communities.



Graphic courtesy The Weekly Times, 2010

<sup>10</sup> “Priority works to increase the effectiveness and efficiency of environmental water delivery in northern Victoria, July 2010”, Unpublished report, Victorian Department of Sustainability and Environment

An approach that would be more acceptable in delivering triple bottom line outcomes has already been delivered through co-operation between governments: *Water for Rivers* is a company established by joint agreement between the Commonwealth, NSW and Victorian Governments to recover water for the Snowy and Murray Rivers.

*Water for Rivers* is on track to meet its target of returning 282 GL of water to the environment (212 GL for the Snowy, 70 GL for the Murray) and it has done this through a strong emphasis of infrastructure investment and environmental works and measures. It has achieved at least 70 per cent of the water recovered through infrastructure and works and measures programs, with only 84 GL directly purchased from irrigators, much of it in conjunction with infrastructure works or irrigation system rationalisation projects.

### *River Operations*

*Water for Rivers* is pursuing an additional method of recovering water for the environment through more efficient river operations. This is an avenue that has not received significant attention but which can deliver water to the environment and consumptive users by reducing “losses” and unaccounted for water.

The principle uses computer management tools, upgrades of infrastructure and operational processes that enable better, more precise control of flows through river systems. Such a model is proposed for the Murrumbidgee River where a project costing \$80 million could recover 80,000 ML of water. Further information on the Murrumbidgee proposal can be found at [www.waterforrivers.org.au/projects/current/murrumbidgee.asp](http://www.waterforrivers.org.au/projects/current/murrumbidgee.asp) and [www.statewater.com.au/Current+Projects/Water+for+Rivers+Projects](http://www.statewater.com.au/Current+Projects/Water+for+Rivers+Projects).

NIC accepts that works and measures may not necessarily achieve the same environmental outcome as a purely flow-related regime. However this is an example of the trade-offs that will need to be considered if we are to achieve a true triple bottom line outcome.

**Recommendation 2: That the MDBA produce a list of recommended environmental works and measures projects, along with indicative costs, water savings and environmental outcomes, for consideration by governments.**

### Quality of science

*“This is a very infant science, very high degrees of uncertainty as to exactly how you manage water to get environmental results.”<sup>11</sup>*

- Professor John Briscoe, Harvard University, World Bank Senior Water Adviser, International Adviser to the MDBA

NIC does not intend to provide a critique of the full gamut of the science as presented in the Guide. However we outline below examples of where imperfect science, assumptions or data is being used or where common sense has been left by the side of the road.

At the technical workshops run by the MDBA in November, it was astounding how often participants were told that there was “more work to do” on issues or that the information had not been “fully developed yet” or that the staff are “aware of the limitations” of the data or science used.

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<sup>11</sup> Excerpt from interview, ABC Radio National Breakfast, 4 November 2010

The MDBA admits that most of the evidence base that it uses falls into “the medium confidence category” which “...may not have been subject to formal peer review”<sup>12</sup>.

To support the quote referenced above, we note the Authority’s comment on page 230 of Volume 2 that there is a “lack of available scientific data and research to elicit specific empirical cause-effect relationships for many environmental assets”. In other words, we don’t know that if we provide more water to this site what the outcome might be.

This is further highlighted by the statement that “[the national and international] technical peer review recommended that the Authority specify a range of environmental water requirements for the Basin because its river systems are dynamic and the current level of understanding of ecological responses to environmental water is relatively poor”<sup>13</sup> (our emphasis added).

Therefore, are we providing too little? Too much? Too frequently? Not often enough? With this lack of understanding, it is highly likely that the MDBA will fail to achieve its environmental objectives and/or create significant economic hardship for no reason.

To provide another example, irrigators know that salinity poses a significant threat to the Basin. It was raised as being extremely significant several years ago in the Basin Salinity Management Strategy with dire predictions about future salt loads, particularly in the lower end of the Basin.

We note that the Guide now states that recent data suggests that “future salt mobilisation from dryland catchments is unlikely to realise these predictions”<sup>14</sup>.

Irrigators are concerned that, like the previous salinity science, some of the more dire predictions in vogue at the moment will prove to be equally unreliable in future, but with the Basin Plan already implemented, the social and economic consequences will have already occurred and the damage done.

The point we make is that the science may be the “best available” but it is clearly not very good and cannot be relied upon to provide definitive answers on the needs of the environment. Ultimately this will require a judgement call on the part of politicians who are elected to decide on how to best balance the competing needs of the community. This should be done after considering the “best available science” and community views. In our view, any decision made simply on “science” or by “expert” groups will fail the triple-bottom-line test.

NIC is aware that the Act requires the Authority to use the best available science and the precautionary principle (in the guise of the “principles of ecologically sustainable development”) in its deliberations. The precautionary principle can be summarised by saying: “Even if we don’t understand the problem or the solution, we should act to protect the environment to be on the safe side.”

As many attendees of the MDBA’s community information sessions have complained, it is disappointing that the precautionary principle is not applied to the social and economic side of the equation, particularly given the MDBA’s self-admitted paucity of accurate data in this area.

Notwithstanding the legislated direction to use the precautionary principle, it is clear that the best available science is indeed, not that great.

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<sup>12</sup> Volume 1, p. 38

<sup>13</sup> Volume 1, p. 69

<sup>14</sup> Volume 2, part 1, p. 47

**Recommendation 3: That the MDBA clearly advise Government that it cannot be sure of achieving environmental outcomes based on the “best available science” and that current programs such as Water for the Future (current forward estimates programs), The Living Murray and Water for Rivers be allowed to proceed and then assessed for measurable outcomes before additional water recovery is pursued.**

#### *Use of Judgement*

We are also concerned that significant judgement has been made in coming to final decisions on some key issues. While it is our view that this process does indeed require informed judgements to achieve a balanced outcome, these should be made explicit and justification for the decision made clear.

For example, Volume 2 of the Guide explains that a confidence limit of “+/- 20 per cent” should be applied to the end of system flow requirements at the high uncertainty end and +/- 10 per cent for the low uncertainty end<sup>15</sup> but gives no justification for why this figure has been used.

**Recommendation 4: That the MDBA clearly explain where judgement has been used in finalising decisions and fully justify how it arrived at such judgements.**

#### *Environmental Watering Requirements*

Appendix B of Volume two of the Guide contains a number of examples that highlight our concerns about the quality of the science, data and modelling that is being used.

The section on the Riverland-Chowilla Floodplain notes that the MDBA has predominantly used the “Riverland Ramsar site ecological character description...(Newall et al 2009)” to determine the site’s environmental water requirements.<sup>16</sup>

In attempting to meet the target for the site of “80 per cent of black box woodland in good condition” the Guide cites Newall’s report as suggesting that flows of 250,000 ML per day would be required. It then goes on to highlight that such flows have only occurred once in 110 years and so are clearly not accurate or realistic. Even flows of 140,000 ML per day have only occurred 9 times in 110 years, so the Authority has settled on a figure of 125,000 ML per day at least 10 years in 100 to meet its targets.

It is not surprising then that the Guide states: “...recommended flow regimes and inundation requirements within existing literature are often inconsistent with the modelled without-development flow data (this is not uncommon)”.<sup>17</sup>

The Guide attempts to explain these anomalies on page 664, but it does beg the question – if these numbers were so unrealistic, what other data is inaccurate or nonsensical?

The same section also notes that “inconsistencies between modelled floodplain inundation and modelled flows that are unresolved”<sup>18</sup>.

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<sup>15</sup> Volume 2, p. 115

<sup>16</sup> Volume 2, Appendix B, p. 661

<sup>17</sup> Ibid, p. 663

<sup>18</sup> Ibid, p. 661

See Recommendation 3 (above).

### *Sustainable Rivers Audit – an appropriate evidence base?*

The Guide relies heavily on the MDBA’s Sustainable Rivers Audit (SRA) as the basis for the health of the rivers and therefore the need to act. In our view, this is an unrealistic base from which to work.

Firstly, the SRA was undertaken between 2004 and 2007 in the middle of the worst drought in recorded history. It is therefore not surprising that in a period of extremely limited water availability, the health of the system was found to be under stress, even allowing for the fact that the data was compared against a “without-development” reference period.

But secondly, and as mentioned earlier in relation to the *Water Act 2007*, the SRA considered three distinct measures of river health of which hydrology (water flow) was only one.

The overall results of the SRA indicate that only three of the 23 river valleys were assessed as being in “good” or “moderate” ecosystem health and the remaining 20 were rated “poor” or “very poor”. However on the hydrology measure, the result is almost exactly reversed: only five valleys were in the “poor to moderate category”, while the remaining 18 are rated “moderate to good”.

As the Guide points out: “More than two-thirds of sites were rated as being in moderate to good condition in terms of long-term hydrologic regimes”<sup>19</sup>.

So the SRA indicates that the problem is not just lack of water, but the only solution the MDBA is offering is - more water.

Given the Basin Plan is all about returning flows to the rivers, we fail to see how it will address the non-flow measures of fish and macroinvertebrate condition given that neither of these are entirely reliant on flow for their health and are of course influenced by other factors such as introduced species, land use, cold water pollution and migration paths.

### **Recommendation 5: That the MDBA use wider measures of river health than just hydrology and solutions other than “just add water” must be provided.**

This recommendation supports that at Recommendation 1c.

### *Inconsistency of targets*

Appendix B of Volume 2 of the Guide outlines the environmental watering requirements for the key hydrologic indicator sites. For the sites along the River Murray, there is an inconsistency in the targets that are set and with no explanation of why.

For example, consider the following table which outlines the targets set for river red gum and black box communities:

Indicator site	Red gum forest <sup>a</sup>	Red gum woodland <sup>a</sup>	Black box <sup>a</sup>	Reference <sup>b</sup>
Barmah Millewa	100	100	100	p.611
Gunbower-Koondrook-Pericoota	100	100	100	p.635
Hattah Lakes	100	80	50	p.651

<sup>19</sup> Volume 2, part 1, p. 31

Chowilla Floodplain	80	80	80	p.660
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<sup>a</sup> Percentage target to maintain in “good condition”

<sup>b</sup> From Volume 2, Part II, Appendix B

The Guide provides no explanation as to why these differing targets have been chosen for the same species on the same river.

In addition, the same section also provides the requirements for the Edwards-Wakool system and yet couches the targets in terms of area: >15,000 ha for red gums and >2000 ha for black box, however no explanation is given for why a different unit of measure is used.

*Potentially unrealistic targets*

As per the above, we submit that it is inappropriate and misleading to target 100 per cent of a given species to be in good condition. Even under completely natural situations we submit that a percentage of trees would be less healthy given distance from the river channel or proximity on the flood plain, disease and pest attack.

**Social and Economic Impacts**

The MDBA has admitted that it has a paucity of accurate data and analysis of the likely impacts of removing water from the productive pool and that it is undertaking further work. The data it has presented in the Guide does not fill us with great hope of what might be forthcoming.

In particular, the notion that change of this magnitude would only cost 800 jobs was laughable from the start and it is not surprising that the Authority backed away from it rather quickly. This does beg the question though as to why the figure was included in the first place. The two main figures presented in the Guide in relation to impacts make no sense when presented side by side – a reduction in Gross Value of Irrigated Agricultural Production (GVIAP) of \$805 million and a loss of 800 jobs basin-wide (or 3000 jobs nationally). On that scale, each job is worth \$1 million – clearly not accurate.

We understand that the work contributed by ABARE to come up with these numbers is considered to be “state of the art” and that the models are “the best we have”.<sup>20</sup> This may well be true, but it is also clear that these estimates are not particularly useful to describe the immediate impact on people and communities. As noted by the Secretary of the Department of Agriculture, Fisheries and Forestry, Dr Conall O’Connell:

“I think it is probably important to understand that that percentage which results in those numbers—the 800 and 3,000, and Mr Morris can help me here—is looking at the effects over the medium to long term once the economy manages to adjust. It is not talking about the numbers of individual people that may be affected region by region and town by town.”<sup>21</sup>

As Dr O’Connell notes, these are figures that consider what has happened when the “economy manages to adjust”. If the MDBA or Parliament is to make an informed decision on what the likely social and economic impacts of reform are going to be, it needs to be acutely aware of the scale of

<sup>20</sup> Mr Phillip Glyde, Senate Hansard, ABARE at Rural Affairs and Transport Committee estimates, 20 October 2010, p. 62

<sup>21</sup> Dr Conall O’Connell, Ibid, p. 51

those impacts in the short term and at local level – not 20 years down the track when the whole world has changed.

In our view, it was grossly misleading for the MDBA to use those numbers in the Guide when it clearly knew the social and economic impacts in the short term, and at local level, would be far more significant.

**Recommendation 6: That future work by the MDBA in assessing the social and economic impacts of the Basin Plan focus specifically on the local, regional and short-term impacts, rather than those of a Basin-wide or national scale and in the long-term.**

More importantly, it is critical that any social and economic impact analysis is used to actually adjust the volume of water delivered back to the environment. We understand that the Authority accepts that a figure above 4000 GL would cause too high a price for people and communities, but this decision is based on the flawed long-term and Basin-wide projections.

We submit that when proper consideration is given to the local and short-term impacts, it will be necessary to further revise down the figure in order to ensure a triple-bottom-line outcome.

Otherwise, to undertake work on the impacts but do nothing to then reduce those impacts would be pointless. It would be akin to a bystander watching a house burn down and describing what is happening, but doing nothing to help.

On a more positive note, we applaud the MDBA for its decision to move away<sup>22</sup> from a previous position that water may be sourced from particular catchments for downstream use by using data such as gross returns per megalitre to make economic comparisons. As we have stated previously, this measure of economic return is misleading and highly variable in any event and would be akin to Government “picking winners” in terms of crop choice and should not be considered.

### **End-of-system flows**

Irrigators understand the need for adequate end-of-system flows to maintain a healthy system, however we believe the Authority has failed to justify the arbitrary targets it has set. It indicates that 60 to 80 per cent of without development flows in a certain catchment is considered “moderate” and should be an aggregate target<sup>23</sup>.

NIC asked MDBA staff at the November workshop what the scientific justification was for using end of system flows as an indicator of catchment health. The answer we got was: “We looked at all the options and that’s the one we thought was the best”. Hardly scientific.

We believe the end of system flow data is highly questionable to begin with.

According to the Guide<sup>24</sup>, Gwydir River inflows are 1,131GL and without development end-of system flows have been calculated at 429 GL or 38 per cent of inflows. The Gwydir is essentially a terminal wetland system. By comparison the same table shows total Border Rivers inflows of 2195 GL with pre-development outflows of 797 GL or 36 per cent, while the Namoi has pre-development outflows of 39 per cent. It is inconceivable that a terminal wetland river system has a higher without development outflow than freely flowing systems like the Border Rivers and Namoi. Local

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<sup>22</sup> Volume 2, p. 158

<sup>23</sup> Volume 2, Part 1, p. 104

<sup>24</sup> Volume 1, p. 47

knowledge around the Gwydir strongly indicates that the only time the Gwydir made significant contributions to the Barwon Darling was during large floods – about five times over the past century.

**Recommendation 7: That the MDBA provide a scientific justification for the use of 60-80 per cent of natural end-of-system flows as its main indicator of environmental health, including alternative measures that were considered and rejected.**

#### *Ramsar – time of listing*

The environmental water requirements for the Barmah-Millewa Forest provide an insight into another difficult-to-comprehend component of the process, albeit not one of the MDBA's making.

Barmah and Millewa forests were listed under the Ramsar convention in 1982 and 2003 respectively, yet they are effectively the same asset divided by the river channel which happens to also be the state border (hence the different time of listing).

The Guide indicates that one of the objectives is maintain the ecological character of the site at the time of listing<sup>25</sup>. Subsequently it indicates that the ecological character of Barmah has been used as the driver of targets for the whole forest. So we have a character description based on 1982 circumstances being used to set targets for half an asset that must be kept at 2003 conditions (according to Ramsar).

We acknowledge that this is not an issue of the MDBA's making and its approach in the circumstances is logical, but it does highlight one of the problems of using agreements such as the Ramsar treaty for the purpose of the Basin Plan.

#### **Current Diversion Limits**

NIC is concerned that the method used by the MDBA for establishing Current Diversion Limits is opaque, inconsistent across water resource plan areas and confusing.

Many of our members have reported complete bewilderment as to how the MDBA has calculated the CDLs for both surface water and groundwater and why the final numbers have been used.

In our view, the previous "Cap" should be the starting point for any water source. The use of any other measure will undoubtedly create further inequities between regions and states. Section 75 [4] of the *Water Act 2007* states that the relevant diversion limit (the starting point) is "the earliest long-term average sustainable diversion limit for those water resources or part of those water sources, that applied:

- (a) During the 10 years immediately preceding the reduction..."

It is not clear to us that the MDBA has in fact followed this directive from the Act, particularly in a number of instances where it appears that "current use" has been used, as opposed to current allowable diversions.

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<sup>25</sup> Ibid, p. 610



## **Interception activities (plantations and farm dams)**

### *General policy*

NIC understands that the treatment of interception activities is a highly complex and fraught area of policy. We also note that regulation of these activities is a matter for the states.

However we are extremely concerned at the implication in the Guide that, while interception and watercourse diversions are both considered forms of “take”, only watercourse diversions can actually be cut to meet new SDLs.

It is clear that the interception of water by plantation forestry and farm dams has increased considerably in recent decades and has had a marked impact on available water in the system. That irrigators are now being asked to bear the full load of any cuts to restore the system to health, when other sectors have had a demonstrated impact on the resource is completely unfair and cannot be tolerated.

It is incumbent on the MDBA to provide advice to governments on this issue and at the very least that advice should be to ensure that all forms of take are fully accounted for and included in the licensing system. That is, if interception activities are considered to have an impact on the available resource, then those responsible for the activities must be made to purchase entitlements in the market place like any other economic user. The creation of new entitlements to meet the needs of these activities in a capped system would have detrimental third party effects and cannot be tolerated.

**Recommendation 8a: The MDBA should advise governments that interception activities need to be fully accounted for in water accounts and that any interception regarded as take should be licensed and entitlements to reflect that licensing purchased in the open market.**

### *Data contained within the Guide*

NIC believes the Authority has made a significant error in both the presentation of interception estimates and the estimates themselves.

On the one hand it indicates that floodplain harvesting is included in calculations of water course diversions (pgs 47 and 48, volume 1), but then Table 5.3 on page 52 of volume one would appear to indicate that dams used for floodplain harvesting are included in interception. The figures for valleys such as the Condamine-Balonne (203 GL), Namoi (139 GL) and Macquarie-Castlereagh (156) would appear to be very high if they did not include floodplain harvesting, as there is relatively little in the way of peri-urban development or other developments that would necessitate such large farm dam figures in these catchments.

Additionally, the numbers for the Lachlan (230 GL) and Murrumbidgee (344 GL) are very significant and highly doubtful. It is very hard to believe that either of these catchments have farm dams of this magnitude that are not already included in water course diversion calculations.

The Authority practically admits on page 109 that it has little confidence in the data, while the note to the table on page 52 also advises that the “Authority will work to improve estimates of interception...”. Personal discussions with MDBA staff also indicate a lack of confidence in these estimates.

The table indicates an estimate of 1803 GL of water is intercepted by farm dams that are not used for basic rights, not floodplain harvesting and not already counted in watercourse or groundwater diversions. That equates to 13 per cent of all take in the Basin and would appear to be a highly questionable figure.

**Recommendation 8b: That the MDBA explain how it will improve estimates of interception activity.**

### **Environmental watering or deliberate flooding?**

A matter of considerable concern that has been raised with the MDBA through the public consultation process and regularly with NIC is the ability of authorities to provide environmental watering without flooding private land.

We note that on page 199 of volume 1 of the Guide, the MDBA addresses this significant issue (in two paragraphs) and concludes that “the overall risk of flood inundation is low”. This is based on the view that most requirements for key environmental assets recommend flows up to the five year flood average.

However, we remain concerned that this risk assessment is flimsy at best and we offer the following example of why.

The environmental water requirements for the Lower Goulburn Floodplain include a target of flows measured at McCoy’s Bridge of 60,000 ML per day for seven days (with a one day minimum). The Guide targets this level of flow at between 15 and 20 per cent of years, whereas under current conditions it occurs only 6 years in 100.<sup>26</sup>

In early September of 2010 after significant rainfall, the flow rate at McCoy’s Bridge happened to peak at almost exactly 60,000 ML per day.<sup>27</sup> This particular event caused significant flood damage throughout the Shepparton area (upstream), particularly to local infrastructure with the City of Greater Shepparton estimating damage of up to \$2 million.<sup>28</sup> This does not account for the costs incurred by landowners through lost crops and stock.

So even at the bottom end of the proposed range, the MDBA is proposing to almost *triple* the frequency of a flood of this magnitude. This raises significant issues of risk that are not adequately addressed by the Guide.

To provide another example the Commonwealth recently gave up the opportunity to use some of the supplementary entitlements it has purchased on the Gwydir River apparently because the Gwydir wetlands were already flooded and to provide further water would have exacerbated flood damage already occurring to dryland crops surrounding the wetlands.

Finally, the Guide regularly refers to the timing of high flow events as being “constrained to reflect the fact that high flows are dependent on heavy rainfall and will be largely unregulated events”<sup>29</sup>. This highlights the difficulty of planning environmental watering when high flows rely on rainfall events – we can model how they might be allowed to happen, but we can’t control them.

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<sup>26</sup> Volume 2, Appendix B, p. 531, Table B4.5

<sup>27</sup> [http://riverdata.mdba.gov.au/sitereports/405232c/405232c\\_0100.00\\_0400.00.csv](http://riverdata.mdba.gov.au/sitereports/405232c/405232c_0100.00_0400.00.csv), See 10 September, 2010

<sup>28</sup> <http://www.abc.net.au/news/stories/2010/09/23/3019964.htm?site=shepparton>

<sup>29</sup> Numerous repeats, for an example see Volume 2, Appendix B, p. 531, Table B4.5

**Recommendation 9: That the MDBA undertake further work on the potential for flood inundation of private land if its recommendations are followed and explain how the risk and legal issues of such events is to be managed.**

### **Offsets**

In our submission, the Authority has poorly explained its methods for accounting for previous savings projects or offsets.

Section 11.1 on page 152 of Volume 1 outlines the “Bridging the Gap” aspect of the *Water for the Future Program* and also outlines other relevant government programs that “could” help offset the proposed reductions. This should be revised to make it abundantly clear which previously saved water will be used as offsets. As a starting point, the 70 GL saved by Water for Rivers for the River Murray should be included.

This is an issue that has caused considerable concern for the irrigation sector and must be outlined with more clarity in the proposed Basin Plan.

As an aside, we note that this section makes comment that the effect of “bridging the gap” on “remaining consumptive users will be nil”. However on page 180, the Guide also notes that the buyback “substantially reduces, though does not eliminate” the potential for changes in the reliability of entitlements. This is one of many examples of inconsistency in the Guide and should be corrected or further explained.

**Recommendation 10: That the MDBA work with other government agencies to compile all of the water available to be used as offsets and indicate the volume of water previously recovered that has already been included in the current diversion limit calculations.**

### **Conclusion**

In NIC’s submission, the Guide does not deliver on the triple-bottom-line promise of the National Water Initiative. This is both a failing of the MDBA and of the process more generally, in particular the *Water Act 2007*.

Irrigators accept there needs to be some water returned permanently to the environment.

But it is clear to us from the critique of the science and process outlined above that it is not possible to have the “science” tell Government what the environment “needs”. Clearly the science cannot deliver in any meaningful way and will always be open to interpretation in any event, particularly given the highly variable nature of Australia’s river systems.

In our submission, a balanced outcome will entail consideration of the best available science along with community views before a judgement call from elected politicians – it cannot be delivered as a definitive technical answer from the Authority.

We expect the Authority to now recognise this explicitly in its proposed Basin Plan and in the advice it provides to the Minister.

**END OF SUBMISSION**