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Submission to the House of Representatives Standing Committee on Regional Australia Inquiry into certain matters relating to the proposed Murray-Darling Basin plan

Friends of the Earth Australia



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This submission is in regard to the potential role that new environmental works and measures projects could play in partially offsetting SDL reductions under the Basin Plan, focussing particularly on prospective project proposals identified by state governments and community interests.

Friends of the Earth supports environmental works and measures as part of the solution to ensuring the long term health and viability of the Murray Darling Basin. However we urge the Committee to be clear about the context and relative priority of environmental works and measures to the broader water reform process.

FoE is particularly concerned to see that environmental works and measures are used to add value to the proposed water recovery target, and not be used as a justification to reduce the amount of water recovered.

Effective and Efficient Delivery of Planned Environmental Water

The MDBA has been clear that the water recovery target of 2750 GL represents a compromise to limit the impact upon the socio-economic fabric of the Murray Darling Basin, particularly at a local level, and that it is only a first step. They propose additional reviews, and flag further improvements overtime, including revision of the amount of water to be recovered

Hydrologic modelling undertaken by the MDBA clearly shows that even with the most efficient possible use of the recovered 2750 GL, ecological targets will not be achieved and the Ramsar status of at least half of the Basin's Ramsar listed wetlands will be jeopardised. Further water recovery and complementary measures will be necessary to maintain the Basin in a healthy working state.

Accordingly, FoE advocates for environmental works and measures to be considered as a mechanism to offset not the proposed 2750 GL water recovery target, and accordingly increase SDLs, but rather the amount of water that remains to be recovered in future reviews and iterations of the Basin Plan.

Further, opportunities to ensure that water delivery - including delivery of planned environmental water - is more effective and efficient are supported as the next priority. FoE notes that greater efficiencies in planned environmental water delivery should accrue to planned environmental water accounts, and not used to reduce the water recovery target. Review of water sharing plans to

increase the effectiveness and efficiency of delivery of environmental water is also supported, but again this improvement in the effectiveness of water delivered for the environment should not offset the Basin Plan water recovery target, but can be used to guide future decisions of water recovery targets.

Approximately 8000 GL of planned environmental water is currently guaranteed in Basin water resource plans. A small increase in water delivery efficiency say 10% could significantly offset required future water recovery.

These changes cost little to nothing, and are very effective and efficient, without creating third party user impacts, for that reason they should be prioritised above environmental works and measures.

Cost-effectiveness of water recovery and structural adjustment programs

FoE is also of the view that the water recovery investment should be strongly guided by value for money, effectiveness and efficiency. The Auditor General, the Productivity Commission and the National Water Commission have all noted that water recovered by buyback is the most effective and efficient form of water recovery.

The Centre of Policy Studies (CoPS) at Monash University has recently employed a dynamic regional CGE model to assess the costs of buybacks compared to irrigation upgrades¹. The paper found that buybacks have so far cost the Commonwealth \$2,000 per ML, whilst infrastructure upgrades cost between \$5,000 to \$10,000 per ML. The paper concludes that the net benefit of infrastructure upgrades, even during droughts, is negative. The paper strongly confirms the success of water buybacks compared to alternatives.

Irrigation upgrades have also been promoted as form of community assistance which supports restructuring in regional communities whilst adapting to less water. However, the CoPS report concludes that the same funds spent on investing in services in the region (such as health, education and aged care) would create three to four times as many jobs as those created by irrigation upgrades. In short, it exposes the upgrades as a second rate approach to supporting and restructuring regional communities.

It is clear that there are very serious questions to be asked about the efficacy of the infrastructure spend in the context of both the volume of water delivered and the economic support provided to communities.

Therefore, we are very concerned about the public policy precedent that is being set by the ~\$5b investment in irrigation upgrades without an objective evidence base to support it and in response to the demands of a vested industry interest. History tends to look askance at large sums of taxpayer money that are allocated poorly and contrary to contemporary expert advice.

We are concerned that the current emphasis on 'environmental works and measures' is yet another 'red herring' that will distract from the proven method of water buyback for improving environmental flows in the Murray-Darling Basin. As with the infrastructure upgrades, it is being touted as the 'answer' without proper consideration of the risks and drawbacks, nor indeed with any detailed assessment of the costs and benefits compared to alternatives.

¹ Wittwer and Dixon 2012. Upgrading Irrigation Infrastructure in the Murray Darling Basin: Is it Worth It? Centre of Policy Studies, Monash University.

Differentiating between flow related and non-flow related measures

We recognise two classes of environmental works and measures (EWM): flow related EWM and non-flow related EWM. Flow related EWM we define as measures that are designed to provide increased environmental flows to a wetland, whilst non-flow related are measures such as fish ladders that are designed to improve biodiversity connectivity.

A recent scientific paper by Pittock, Finlayson and Howitt has reviewed flow-related EWM that have been undertaken to date in the Murray-Darling Basin, particularly those funded under The Living Murray program². They found that, despite the large sums of taxpayers money spent on The Living Murray, the EWM that were constructed will enhance management of only 0.6% of the Basins wetlands. Furthermore, of three Ramsar sites targeted for environmental works and measures, only 30% of those can be regularly inundated as a result of the EWM. Perhaps most importantly, they found that EWM actually contribute to wetland degradation through local diversions of water flows.

Pittock et al concluded that 'only large environmental flows can conserve the majority of the Basin's wetlands', particularly when climate change is taken into consideration. It is clear from the paper that EWM do not and cannot substitute for proper environmental flows, and like the infrastructure upgrades, actually have the potential to lead to negative environmental impacts if they are used as a means to justify increases in Sustainable Diversion Limits.

However, we would note that environmental works and measures that are not flow related, such as fish ladders, have been shown to be a very important measure for restoring biological connectivity along rivers and between rivers and floodplains. Recent studies, for example, have highlighted the mortality rates to native fish from irrigation pumps, which is an issue that needs to be addressed to increase fish stocks. MDBA-funded research found that screening pump offtakes reduced fish mortality rates from 90% to less than 2% in laboratory trials.³ Instead of focusing on these types of EWM which deliver unequivocally strong environmental outcomes, we are very concerned that the focus has turned to dubious flow-related measures in a bid to reduce the volume of environmental flows returned through buyback. The Native Fish Strategy, for example, which is so crucial to the future biological integrity of the rivers of the Murray-Darling Basin and is recognised by all interest groups as a positive and important measure, is likely to suffer from a lack of funding particularly after recent severe budget cuts implemented by the NSW Government.

The pattern that we have seen with MDB Reform of throwing large sums of taxpayers funding at inefficient and ineffective programs should not be repeated again with EWM. EWM must not be used to reduce environmental water targets nor to increase SDLs.

² Pittock, Finlayson and Howitt. 2012. Beguiling and risky: "Environmental works and measures" for wetland conservation under a changing climate.

³ Boys, C., Baumgartner, L., Rampano, B., Robinson, W., Alexander, T., Reilly, G., Roswell, M., Fowler, T. and Lowry, M. (2012). Development of fish screening criteria for water diversions in the Murray-Darling Basin. Fisheries Final Report Series. NSW Department of Primary Industries, Cronulla. See also Baumgartner, L. J. and Boys, C. (2012). Reducing the perversion of diversion: Applying world standard fish screening practices to the Murray-Darling Basin. *Ecological Management & Restoration* 13: 135–143.

Environmentally Sustainable Level of Take Basin Plan assumption

The MDBA's hydrologic modelling of the proposed Basin Plan has assumed that water recovered can be delivered or "shepherded" to multiple sites⁴. This approach represents the most efficient use of environmental water and is supported by FoE.

If environmental works and measures are used to effectively pump water out of the river and retain it, this assumption fails. Accordingly water taken and used in conjunction with environmental works and measures in this manner, cannot be used to reduce the water recovery target, nor increase SDLs.

Truth in Water Accounting

The MDBA Basin Plan defines SDLs as the BDLs minus water recovered. The BDLs are no longer defined as cap, but rather as amounts extracted under water resource plans plus a range of other extractions, or interceptions as yet unquantified, at the date of development 30 June 2009.

This represents a major increase on Cap.

The MDBA Basin Plan, and other audit bodies such as the NWC, have failed to adequately benchmark existing environmental water delivery, particularly planned environmental water delivery.

Any proposal to allow environmental works and measures to reduce environmental water recovery targets, either existing or future targets, must ensure that the anticipated, or projected environmental benefit are in fact delivered, can be measured, and protected against future growth in other water extraction.

⁴ MDBA (2011). River management challenges and opportunities.