



I N L A N D
R I V E R S
N E T W O R K

Submission to the
House of Representatives
Standing Committee on Regional Australia
Inquiry into the *Impact of the Murray-Darling
Basin Plan in Regional Australia*

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About Inland Rivers Network

The Inland Rivers Network (IRN)¹ is a coalition of environment groups and individuals concerned about the degradation of the rivers, wetlands and groundwaters of the Murray-Darling Basin. Member groups of IRN include: the Australian Conservation Foundation; the Nature Conservation Council of NSW; the National Parks Association of NSW; the Central West Environment Council; Friends of the Earth; The Wilderness Society, Sydney Branch and the Coast and Wetlands Society.

IRN has been advocating for the conservation of rivers, wetlands and groundwater within the Murray-Darling Basin since 1991. Accordingly, IRN welcomed bipartisan moves to improve water management, specifically the development of an overarching Basin wide approach to the management of interconnected water sources.

Introduction

IRN appreciates the opportunity to provide a submission to the Inquiry into the Impact of the Murray-Darling Basin Plan in Regional Australia. IRN believes that the Basin Plan exists as the best opportunity available to restore the health of the highly degraded inland river and wetland systems of the Murray-Darling Basin (the Basin).

IRN has recently made a substantial submission to the Murray-Darling Basin Authority in response to the *Guide to the proposed Basin Plan*. This submission details the IRN position on elements of the *Guide*, and it is available for download from the IRN website (and as Appendix 3 to this document).²

IRN is of the opinion that the objectives and requirements of the bipartisan Commonwealth *Water Act 2007*³ provide a strong framework for the development of a Basin Plan that is scientifically robust and environmentally sound. The long term sustainability of the Basin is essential for the health and resilience of the communities that depend on the river system and for the wider Australian economy.

IRN supports the need for structural adjustment assistance to the regional communities with the highest dependence on irrigated agriculture. This will help build their resilience to better withstand prolonged drought and climate change impacts in the future.

The following discussion of the key terms of reference for the Inquiry reiterates the IRN position on the potential impacts of the Basin Plan and the necessary actions required to ensure that a robust and resilient Basin environment is secured for future generations.

¹ For more information see website at www.irnsw.org.au

² See the Submissions and Articles page of the website at: www.irnsw.org.au

³ *Water Act 2007* (Cwlth)

Response to Inquiry Terms of Reference:

- ***The direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community wellbeing***

Before considering the direct and indirect impact of the Proposed Basin Plan on regional communities, the Standing Committee on Regional Australia needs to have a firm understanding of the proposal at a regional scale.

Failure to acknowledge progress to date through government water by backs

IRN is disappointed that the Guide to the Basin Plan (*the Guide*) did not identify the volumes of water already purchased by Government, or saved through funded infrastructure improvements, when outlining the proposed sustainable diversion limits (SDLs).

The political outcry over 27% to 37% reductions across the Basin is based on misleading information. The attached table (Appendix 1) describes the volumes of water already returned to the environment in each region and identifies other opportunities for improved water management that significantly decrease the additional volumes needed to achieve the proposed SDLs.

IRN is concerned that the 27% - 37% reduction figures are being used as part of a scaremongering campaign promulgated by the National Party in the lead up to both the Victorian and NSW state elections. The Murray Darling Basin Authority (MDBA) community consultation meetings, organised to discuss *the Guide*, instead were used by some participants as political campaign meetings. It was very difficult to have questions answered from the floor. For example, the Dubbo meeting held on Thursday 4th November, was attended by Senator Barnaby Joyce; Federal Member for Parkes, Mark Coulton; State Member for Burrinjuck and Shadow Minister for Water, Katrina Hodgkinson; State member for Barwon-Darling, Kevin Humphries and National Party candidate for the NSW seat of Dubbo, all of whom gave political speeches at the meeting. The MDBA allowed placards and political statements to be displayed by them at the front of the venue directly below the stage where the MDBA representatives were seated.

Proposed further work to establish full cost-benefit analysis for long term Basin sustainability

To fully understand the direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community wellbeing, the Standing Committee needs to commission the following work:

- A base line analysis to determine the dependency of regional communities on irrigated agriculture compared to dry land production and other economic activities;
- A cost-benefit analysis of business ‘as usual’, with a declining riverine ecosystem, to enable a prediction of long term economic outcomes;
- The cost-benefit analysis should include the cost of managing increased blue-green algae blooms, salinity and turbidity, loss of floodplain pastures, loss of recreational and tourism opportunities, loss to the fishing industry;
- A cost-benefit analysis of a healthy river system to provide a comparison.

Improved water quality and river health delivered by a robust Basin Plan will enhance the tourism, fishing and floodplain grazing industries.

The environmental services delivered by healthy rivers and wetlands in the Basin have been valued at \$2.1 billion per annum.⁴ This value must be taken into account when considering the economic and social impacts of the Basin Plan (See Appendix 2 - Economic Value of a Healthy Murray Darling Basin).

The Basin economy is already a highly diverse economy. While agriculture plays a major contributing role, it is not the greatest source of economic activity in the Basin.⁵ The communities depending heavily on income from irrigation need assistance to become more diverse. Research and development investment into low water use crops is required, as well as identification of other industries not reliant on water use.

An example of a low water, low chemical use crop with numerous commercial by products is industrial hemp. This emerging industry has the potential to create major employment opportunities in regional Australia. The dominance of the flood irrigated cotton and rice industries in the Basin needs to be analysed in relation to economic return per megalitre of water use as well as the environmental impacts and costs of that water extraction.

- ***Options for water-saving measures or water return on a region-by-region basis with consideration given to an analysis of actual usage versus licence entitlement over the preceding fifteen years***

Analysis needed into opportunities for regional diversification and moves towards water use efficiency

A region-by-region analysis of water use and economic returns, opportunities for diversification away from high water dependent crops and industry investment in water use efficiency needs to be conducted.

⁴ Australian Conservation Foundation, ‘Socioeconomics and the Murray-Darling Basin: water allocation and economic viability’, 20th October 2010. p4

⁵ Ibid p1

There is widespread acceptance that in the face of declining environmental health, business as usual is not an option.

The challenge is to wind back over allocation to restore and sustain the natural dynamics which are reliant on both sufficient volume and a more natural pattern of river flow.

Rise in jobs despite recent reduced water availability

Because the last 10 years have experienced a drought of record, an analysis of actual usage versus licence entitlement gives a good indication of how the Basin economy can function on lower water availability.

The Guide finds that despite drought conditions over the past five years, employment in the Basin continued to grow strongly at 8.3 per cent. Growth in jobs has been largely in the service industries, unrelated to agriculture.

The recent decade of drought presents the best available data on what actually (as opposed to theoretically) occurs when water availability is reduced.⁶ Between 2001 and 2007 water allocations were reduced by 70 per cent while gross value of irrigated agricultural output over the same period fell by only 0.12 per cent.⁷

The report being cited, as evidence that jobs will be lost due to proposed sustainable diversion limits (SDLs), claims there will be a 7.3 per cent loss of employment in Mildura.⁸ Actual ABS data from 2001 to 2006, when the drought reduced water availability by greater than 25 per cent, shows employment in Mildura rose by 4 percent and across the Basin by 1.2 per cent.⁹

- ***The role of governments, the agricultural industry and the research sector in developing and delivering infrastructure and technologies aimed at supporting water efficiency within the Murray-Darling Basin.***

Management beyond infrastructure

IRN agrees that government, industry and the research sector have a role in developing new economic opportunities in the Basin to move away from water dependent crops.

⁶ Ibid p2

⁷ ABS, Experimental Estimates of the Gross Value of Irrigated Agricultural Production 2000-2001 – 2007-2008 and ABS, Water and the Murray Darling Basin A Statistical Profile 2000-2001 to 2005-2006, p73.

⁸ Judith Stubbs and Associates (2010) *Report 4: Exploring the relationship between community resilience and irrigated agriculture in the MDB: Social and Economic Impacts of Reduced Irrigation Water*, report commissioned by Cotton Catchment Communities CRC

⁹ Australian Conservation Foundation, 'Socioeconomics and the Murray-Darling Basin: water allocation and economic viability', 20th October 2010.

Many engineering and infrastructure solutions for water use efficiency have ongoing adverse environmental impacts. Proposals for new reregulating infrastructure, new in-stream storages and other similar engineering solutions are not supported by IRN because they will not assist in improving the Basin health.

At the same time governments have an obligation to ensure our natural capital is managed wisely for the benefit of future as well as present generations. Ecological sustainability underpins the well being of communities and functioning economies.

- ***Measures to increase water efficiency and reduces consumption and their relative cost effectiveness***

Market opportunities for water efficient on-farm practices

Projects to infill open water delivery channels and replace with piped water are necessary but in some cases cost prohibitive. The economic value of the crops produced through inefficient water delivery systems needs to be clearly analysed, as does the value to the tax payer of funding these large projects. The cost per megalitre returned to the environment is significantly higher through funding infrastructure projects than through buyback programs. A strategic framework which looks at a realistic delivery timeframe for benefits from buy-back and infrastructure works is needed.

Improved on-farm water application methods such as drip irrigation and sub surface irrigation have already been taken up by the more innovative irrigators. These practices should be invested in across the industry so that flood irrigation wastage is removed from the Basin allocation. The tax payer should not have to pay for these types of industry improvements. If the crops grown on flood irrigation are not profitable enough to fund an investment into water use efficient application methods, then the industry should diversify into less water dependent crops.

For instance, irrigators have an opportunity to fund on-farm water use efficiency gains by selling part of their licence to the Commonwealth or State Governments as part of water buyback programs.

- ***Opportunities for economic growth and diversification within regional communities***

Healthy ecosystems provide opportunity for diversification

Diversification into expanding a variety of industries such as recreation and tourism will require healthy functioning ecosystems to attract customers from outside the regions. Degraded ecosystems do not attract clients for businesses within these industries, although **Australia's regional rivers and wetlands offer a unique economic resource to underpin such industries.**

In addition to the \$12 billion dollar 'Water for the Future' initiative, current Australian Government investment into regional Australia includes:

- . \$200 million Strengthening Basin Communities program to help local governments in the MDB plan for reduced water availability;
- . \$800 million in a new Priority Regional Infrastructure Program to fund projects identified by local communities;
- . \$1.8 billion Regional Priority Round from the Health and Hospitals Fund to build and upgrade regional health infrastructure and support clinical training capacity in regional hospitals;
- . Regional universities and TAFEs will have access to \$500 million from the Education Investment Fund.

• *Previous relevant reform and structural adjustment programs and the impact on communities and regions.*

Structural adjustment to build community resilience

IRN supports structural adjustment assistance to regional communities in the Basin to assist diversification into sustainable industries that are not heavily dependent on water use. This will help build the resilience of these communities to withstand prolonged drought and climate change impacts

New South Wales example

The NSW Government has a history of assisting uneconomic and environmentally unsustainable industries through major structural adjustment programs. These have been proven to support regional communities to diversify away from declining industries.

Examples include the \$80m restructure package awarded to the forestry industry as part of the Western Regional Assessment process that created new National Parks and reserves in the Brigalow Belt South and Nandewar bioregions in 2005.

The recent decision to protect the River Red Gum wetland forests of the Murray, Murrumbidgee and Lachlan catchments, included a \$97m regional restructure and community development package that has assisted new industries to start up in the region.

Furthermore, over allocated commercial fishing zones have had licences bought back by the NSW Government to prevent the collapse of fish stocks in areas like Lake Macquarie on the Central Coast. This has enabled the recreational fishing and tourism industry to grow and add economic value to the region.

Conclusion

Currently the whole of government institutional arrangements don't adequately address issues of wider significance in relation to the management of water resources in the Basin. That being, that implementation of improved water management requires complimentary measures that assist community uptake for long-term sustainable practices, which take into account ecological imperatives.

To conclude our submission, IRN would like to reiterate the following key points.

That:

- IRN supports the broad concept of the Basin Plan and that IRN believes it to be the best opportunity to address overallocation and overextraction of water resources and restore balance to the Basin;
- there has been a failure to acknowledge and communicate the reductions already achieved through current government water purchases;
- many of the public community engagement activities undertaken by the MDBA have been allowed to have been politicised;
- a full cost-benefit analysis is needed in order to establish the baseline for community dependency on irrigated agriculture compared to dryland farming, the costs of business-as-usual with declining river health and the benefits of healthy working river systems;
- a region-by-region analysis of water use and economic returns, opportunities for diversification away from high water dependent crops and industry investment in water use efficiency needs to be conducted;
- the rise in jobs despite recent reduced water availability should be taken into account;
- movement away from highly water-dependent crops should be investigated;
- management of water resources should not be equated to infrastructure works which often have dire ecological implications;
- the water market already provides economic incentives for water users to move towards more efficient use of water;
- investment into regional communities should reflect the opportunities for economic diversification provided by healthy rivers and wetlands;
- a suite of structural adjustment assistance measures will be needed in order to build the economic resilience of some communities heavily reliant on unsustainable industries.

IRN would like to retain the option of attending and presenting at the public hearings which are to form part of this inquiry in due course.

Appendix 1 - Table: Remaining reductions under Guide Scenarios with held environmental water & identified operational savings

NSW Catchment	Current Diversion Limit (CDL) (GL/y) ¹	Held Enviro Water (GL/y) ²	SCENARIO 1 (3,000GL/y)							SCENARIO 3 (4,000GL/y)				
			Proposed SDL - Scenario 1 (GL/y) ³	Scenario 1 GAP ⁴	Remaining reductions to be made (after including Held Env. Water as per Guide) (%) ⁵	Other Achieved Enviro Water (TLM not included in Guide)	Remaining reductions after other achieved enviro. water is included (%)	Cwlth efficiency & purchases after Guide plus NSW Govt identified operational savings	Remaining reductions after achieved water savings, purchases & operational savings included (%)	Proposed SDL - Scenario 3 (GL/y) ⁶	Scenario 3 GAP ⁷	Remaining reductions to be made (after including Held Env. Water as per Guide) (%) ⁸	Remaining reductions after other achieved enviro. water is included (%)	Remaining reductions after achieved water savings, purchases & operational savings included (%)
Border Rivers (Qld/NSW)	607	4	521	82	13.51		13.51	14.92	11.05	495	108	17.79	17.79	15.33
Gwydir	451	64	361	26	5.76		5.76	32.73	-1.49	330	57	12.64	12.64	5.38
Namoi	508	6	437	66	12.99		12.99	18.78	9.29	415	88	17.32	17.32	13.62
Barwon-Darling	305	32	262	12	3.93		3.93		3.93	249	25	8.20	8.20	8.20
Lower Darling	61	0	45	16	26.23	14.27	3.00	2.57	1.38	39	20	32.79	10.27	3.16
Macquarie-Castlereagh	735	57	631	47	6.39		6.39	29.76	2.34	600	78	10.61	10.61	6.56
Lachlan	618	45	574	-1	-0.16		-0.16	23.12	-3.90	549	24	3.88	3.88	0.14
Murrumbidgee (NSW/ACT)	2613	64	1934	615	23.54	48.92	22.00	40.00	20.13	1704	846	32.38	30.50	28.90
Murray (NSW, Vic, SA)	4219	309	3126	784	18.58	288.8	11.70	113.96	9.03	2756	1155	27.38	20.50	17.82

¹ From the Guide to the proposed Basin Plan, Vol.1, pp211

² At 30 June 2010, from the Guide, Vol.1, pp153

³ Guide, Vol. 1, pp213

⁴ CDL minus Held Env Water minus Proposed SDL under Scenario 1. Guide, Vol. 1, pp153

⁵ Scen 1 GAP/Current Diversion Limit x 100

⁶ Guide, Vol.1, pp221

Appendix 2

Economic benefits of a healthy river system

Healthy rivers and wetlands provide enormous benefits to Australia through tourism, recreation, water filtration, feeding, breeding and sheltering habitat, flood control and water storage.

An economic study conducted this year by ACF found the **Hattah Lakes** in northern Victoria alone are worth **\$14.5 million** dollars a year to the economy and that the 16 internationally significant wetlands in the MDB generate **\$2.1 billion** of economic benefits to the region every year from ecosystem services only. A global study found the environmental services provided by wetlands around the world stands at around **\$4.8 trillion**.¹⁰

A recent study commissioned by the MDBA calculated that improving the condition of the Coorong wetlands from 'poor to good' condition was worth an additional **\$4.3 billion**.¹¹

Tourism - The natural resources of the Basin provide a basis for many recreational activities. In total, tourism in the Basin is worth **over \$3.4 billion**.¹²

Fish and recreational fishing - Improved e-flows will improve **native fish populations**: with direct benefits to recreational fishing. In 2008/09 there were over 700,000 recreational fishers in Victoria, spending **\$2.3 billion annually** on this activity.¹³

Commercial fishing - The **Coorong area** is important for **commercial fishing** which contributes approximately **\$5.5 million** to the economy per annum.¹⁴ Species targets include Coorong Mullet, Mulloway/Jewfish and Cockles, using a variety of methods including netting. There are also fresh water fisheries in the Lower Lakes.

¹⁰ Costanza, R., d'Arge, R., Groot, R. de, Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P., Belt, M. van den (1997) The Value of the World's Ecosystem Services and Natural Capital, Nature, vol. 387, 15 May.

¹¹ Morrison M & Hatton MacDonald D. <http://www.mdba.gov.au/files/bp-kid/1282-MDBA-NMV-Report-Morrison-and-Hatton-MacDonald-20Sep2010>.

¹² http://www2.mdbc.gov.au/about/tour_the_basin/riverine.html

¹³ Vic e-works proposal. 16 July 2010.

¹⁴ http://www.riversymposium.com/index.php?element=CAMPBELL_Tom_FullPaper

Dredging at the Mouth - The lack of flow out of the Mouth from 2002 has required sand dredging to keep the Mouth open at a cost of more than **\$36 million to keep the Mouth open**¹⁵ – a healthy river should be able to keep its own mouth open

Blue green algae - Low flows and nutrient pollution result in **increasing blue-green algal outbreaks** in the MDB every year. Not only do these mean you can't swim in the water or it would make you sick, stock can't drink it and it kills animals that come into contact with the water including stock and dogs. If you can't go into the water it is an impediment to tourism, fishing and other recreational activities as well as causing problems in watering stock and it costs millions to treat the water and make it fit for use. The Darling still holds the world record for the longest BG algal outbreak in the world.

The 1991-92 blue-green algae outbreak along the Darling River brought major costs.¹⁶ **In NSW alone, there was an estimated \$2.4 million loss of revenue to the tourist industry. Up to \$2 million was spent on alternative water supplies.**

Salinity in the Basin – costs up to \$270 million / year.¹⁷ Overall, the estimated annual costs are substantial: \$130 million in agricultural costs, \$100 million in infrastructure costs, and \$40 million in environmental costs. These include impacts on productivity, land values, aesthetics, remediation, damage and loss of wetlands and habitat for wetland species including, for example, Ibis.

Important species including Ibis – voracious appetite for mice and insects, especially locusts and they keep crop eating pests in check and reduce the need for expensive chemical use. Studies show a single rookery of Straw necked ibis can consume **500 tonnes of insects** a day¹⁸ that would otherwise be eating crops and multiplying!

Loss to industry that relies on healthy rivers – Rivers die from the bottom up. The consequences of over-extraction for the lower part of the Murray are obvious – increased salinity, acid sulphate soils and no water for irrigators no matter how big their water licences are. For example, there used to be 23 dairy farming families around the Lower Lakes, now there are 3. They went out of business because they were unable to irrigate pasture with salty water and were unable to physically get pumps into the water as the level receded (Kerri Muller, pers comms).

¹⁵ http://www.environment.sa.gov.au/dwlbc/assets/files/MR_dredging_16dec09.pdf

¹⁶ http://www2.mdbc.gov.au/nrm/water_issues/water_quality/?MySourceSession=a946a783e36a73e4e3bafd5696f09f84&maintain_session=1

¹⁷ http://www2.mdbc.gov.au/salinity/land_and_water_salinity.html

¹⁸ <http://www.brg.cma.nsw.gov.au/index.php?page=native-veget>