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A Council to advise on the Barwon-Darling River

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Submission to the House of Representatives Regional Australia Standing Committee

Inquiry into the impact of the Murray-Darling Basin Plan in Regional Australia

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Introduction

The Mungindi-Menindee Advisory Council (MMAC) is the peak body of water users along the unregulated Barwon-Darling River. It represents local irrigation groups, local councils and riparian users along the length of the Barwon-Darling River.

MMAC was originally set up by the NSW Government to provide advice on water resource issues in the Barwon-Darling catchment. It is a voluntary organisation funded by membership fees and levies. The Council is managed by a committee of representatives from irrigation groups, shire councils and riparian water users.

MMAC represents its members on NSW Irrigators Council, and supports the submission made by the peak irrigator's body in NSW to this Inquiry into the Impact of the Murray-Darling Basin Plan in Regional Australia.

We also welcome the opportunity to make our own submission to, and the opportunity to speak with the Committee when it visits Bourke on 15th February 2011. MMAC members are be happy to take the Committee on a tour of Bourke irrigation farms, so that members may see the impacts of drought & recent water cuts on our industry & community.

We are most concerned about any future reductions in licensed water allocations that could result from a poorly designed and poorly implemented Basin Plan.

Commonwealth Water Act

In other submissions from industry bodies much has been said about the Commonwealth Water Act. The main argument seems to be that the Act is the basis for the Basin Plan; and that the Commonwealth Water Act is flawed; which has led to a flawed Plan.

Arguments have been forcefully put to say that the Act must be amended to allow for the equal consideration of the consequences of the plan on social, economic and environmental factors.

MMAC agrees with these arguments, especially the advice provided to the Standing Committee by the NSW Irrigators Council.

The Barwon-Darling River System

The Barwon-Darling River is the only large unregulated river system in NSW, running from Mungindi on the NSW-Queensland Border the Menindee Lakes (see map attached).

Due to tributary inflows and local rainfall the Barwon-Darling is rarely resource-constrained, with regular large flow events running down the system, except during long and persistent droughts as experience in 2001 – 2009.

Off-rivers storage systems on farms allow diversions to be maximised in the high flow ranges; giving farmers the opportuity to save highflow water for use in low-flow periods.

On the Barwon-Darling system current average surface water volume for the Basin (as measured at Bourke) is 3,515GL (CSIRO) and, under the new cap management plan, long-term average extractions are 173Gl per year. Barwon-Darling irrigators use 4.9% of average annual flows.

This average use for extractive industries is far below most other valleys in the MD system.

Water use on the Barwon-Darling

Irrigation on the Barwon-Darling is mainly for cotton and wheat.

However at Bourke in recent times there has been diversification into citrus, table grapes , jojoba, melons and other fruits and vegetable. The recent drought and water cuts have severley impacted on all these crops, and much of the permanent plantings of citrus, table grapes and jojoba have been abandoned or removed.

Before the drought, the Bourke economy benefited from expansion of the cotton & horticultural industries and the establishment of processing plants – including two cotton gins, 2 fruit-packing enterprises and a large commercial nursery.

These developments, led to the creation of many more jobs and business opportunities.

A report commissioned by Darling River Food & Fibre in 2001 by Hassal & Associates found that, at that time before the major cap cuts and the big drought of 2001-2009, the irrigation industry at Bourke was responsible for:

- Over $70m of average annual agricultural output in the Bourke Shire;
- Over 700 equivalent fulltime jobs (in a population just over 3200);
- 45% of total employment in the shire;
- 70% of total on-farm employment; and
- 64% in value of the shire's agricultural output.

This is no longer the case today (see Judith Stubbs Bourke Case Study).

MMAC involvement in the reform process

Our members are well aware that our communities and our irrigation industry rely on a healthy river.

MMAC and it's members have been vitally involved in the reform process, including the introduction of the environmental flow package in 2001/01 in an effort to improve downstream flows in times of low flows in the system.We also helped with the introduction of the North West Unregulated Flow management regime to assist with fish flows over critical weirs and the embargoing of flows to counteract blue-green algae outbreaks.

MMAC has been a major contributor to the design and implementation of the cap management strategy on the Barwo-Darling. Although we have found the State Government to be untrustworthy in the implementation phase, the original concept was supported by all stakeholders on the Barwon-Darling.

We have also been involved in commisioning a number of studies to look at the health & hydrology of the river, and to assess the social and economic state of our communities.

Recent management changes in the Barwon-Darling

In recent years irrigators and irrigation communites along the Barwon-Darling have had to adjust to a number of reforms, including:

- a 10% cut in water access under the State Government environmental flow package;
- a massive 67% cut in the annual volumetric limit available to irrigators under a State Government cap management strategy, without compensation or structural adjustment. Total annual volumetric limit of all water licences was cut back from 524GL to 173GL.
- the purchase of water entitlements along the river (including Toorale & Twynam) which have taken vital productive capacity away from economically fragile communities;
- further cap adjustments announced recently, including a longterm suspension of use of our carry water – during one of the longest and sustained flow periods in this river;
- access changes foreshadowed in the State Government's new Water Sharing Plan for the Barwon-Darling River;
- an increase of some 140% in water licence fees over the past 5 years, despite these cuts.

These reductions have come at a time of one of the worst and most persistent drought from 2001-2009. As a result, communities along the Barwon-Darling have suffered greatly.

It is difficult to apportion the impacts of the drought versus the severe cuts to water implemented in 2006/07 by the NSW State Government.

However, perhaps the best guide to the impact of reduced water availability on regional communities is to look at the impact of drought and water cuts at Bourke over the last 10 years.

Aside from the social and economic impacts there are psychological impacts too – impacts that produce negativity and lack of hope for the future.

Given all these reforms and cutbacks that have hit one after another, without time to recover or even assess the last changes, local people have had a gutful. “Reform fatigue” is a real problem in our businesses and organisations, and amongst our people.

It would be a good idea to let the recent reforms be implemented and assessed properly, and then look at the costs and benefits that have already occurred.

On the Barwon-Darling – there is no room at all for any more reductions in water availablity. A 67% cut to licences has the industry and community reeling, and unable to recover from drought.

Socio-economic impacts

In Bourke for example, there have been a number of negative impacts that will illustrate the probable impacts of taking more water away from the irrigation industry on the Barwon-Darling:

- Significant losses in regional production (in some years almost 100%);
- Severe reductions in farm valuations, and business equity for farmers;
- Reduced confidence on the part of farmers and business people; and a fear of investing further in the local economy due to persistent government efforts to take away water and productive capacity from our community;
- Business failure - in recent years irrigation farmers have been bankrupted, placed into receivership and have had to walk off their farms;
- Related businesses have left or have experienced significant business downturns;
- The horticulural industry at Bourke has been decimated; with farmers abandoning all table grape production, the loss of almost 50% of citrus orchards in the district and the closure of the only commercially run plant nursery in the shire;
- This has led to massive job losses in these local irrigation dependent communities;
- Bourke lost 20% of it’s population between the census counts of 2001 and 2006;
- Loss of basic community services – during this time a school at Bourke that had over 70 children before the drought and water cuts lost so many children that it has closed completely and all buildings were removed to the coast. The machinery dealers have all left town (John Deere & Case IH), one of the two registered clubs has gone into receivership and closed, and a major supermarket has closed down.

Any further reductions in water access will have grave consequences for irrigation-dependent communities along the Barwon-Darling – communities such as Mungindi, Collarenebri, Walgett, Brewarinna and Bourke.

Specific Responses to the Terms of References

Direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community well-being:

Some of this is addressed above, and while there may be some benefits from increased water for the environment; further reduced water for irrigation will result in a range of social and

economic impacts on agricultural communities - especially irrigation-dependent communities like Bourke, Walgett, Collarenebri and Mungindi.

It is imperative to distinguish between short-term factors such as variable river flows, drought, and commodity price cycles, which we have adapted to and managed over many years, and the more permanent impacts from long-term factors, such as government-driven reductions in water for agricultural use.

We draw the committee's attention to the extensive work done by Judith Stubbs *"Exploring the Relationship between Community Resilience and Irrigated Agriculture in the Murray-Darling Basin",* and particularly to Appendix 2 of this report – the *Bourke Shire Case Study*.

We recommend this report to the Standing Committee as an accurate guide to the likely social and economic impacts the proposed plan may have on the people and communities in this remote, disadvantaged and lightly populated part of the Basin.

This report looks at the possibility of further permanent reductions in water availability and the associated impacts, and tries to answer the question *'how resilient are communities likely to be to changes in irrigation water?'*

The study found the following regarding impacts on the community of Bourke:

- Bourke is a service centre to a geographically large and remote area. It is highly reliant upon its agricultural base, with dryland grazing for wool & beef production, and irrigated cotton, being the main produce. With just over 3,000 people at the time of the 2006 Census, Bourke is the smallest, least urbanised and most remote case study area of the eight selected for more detailed analysis.

- Bourke Shire has experienced significant population and employment loss in the period from 2001-06, which is quite different to previous population fluctuations, and almost certainly as a result of the severe drought during this time. In many ways, this is a real time simulation for what is likely to occur with a permanent reduction to water from State and Federal Government policy, including the implementation of the Murray Darling Basin Cap ('the Cap') since 2007, the more recent announcement of further adjustment to entitlements by the State Government to maintain compliance with the Cap, and the setting of new Sustainable Diversion Limits (SDLs) under the forthcoming Basin Plan.

- A permanent reduction in water is likely to permanently constrain economic and social recovery of Bourke, and entrench and significantly worsen existing high levels of social disadvantage, particularly among its large indigenous population.

- Recent reductions in irrigation water under the Cap are likely to provide significant constraints to such recovery, especially for irrigators and related businesses, and are already reported to have been a 'tipping point' for some businesses.

- Further permanent water reductions under future Federal Government policy decisions are likely to have significant impacts on irrigators and related businesses that have been able to remain viable despite prolonged recent stressors. Further reductions in irrigation water in a community like Bourke may remove 'bounce back' options altogether for some businesses.

- Demoralisation of the community and business is a significant issue.

- Socially, the cumulative impacts of current and future government water policy are likely to be severe. Imposition of further permanent water reduction is likely to accelerate population and employment loss, and have serious associated impacts, as Bourke loses the critical mass to support higher order retail and services that are currently in place. Further permanent loss of water will undoubtedly be a major contributor to such a social 'tipping point' in a highly vulnerable area like Bourke.

- Simply stated, Bourke cannot afford to lose more jobs or populations at a time when its civic, business and community leaders are working together after recent flood events to achieve any possible economic and social recovery after a prolonged period of severe stress. The environmental benefits from a further reduction in irrigation water would need to be clearly and transparently articulated and costed to demonstrate that they warrant such high social costs.

We all need to recognise that on the unregulated Barwon-Darling where there is no headwater dam to rely upon, large fluctuations in water availability are normal and expected. There are wet cycles and dry cycles. During dry years our communities contract; and during wet years there is a "bounce-back" and some moderate expansion.

The proposed Basin Plan (and any further adjustments) will set a new average benchmark for communities like Mungindi, Collarenebri, Walgett & Bourke. The bad times will be greater than before, and the recoveries will be slower and more difficult (if at all).

Populations in these remote communities will not recover to previous highs, and during the next drought will drop lower again.

Population decline will put greater pressure on maintaining essential services such as health, education, policing, and housing. We know from the bitter experience of the drought and recent water cuts that further water losses will lead to further loss of jobs and population.

In turn there will be significant damage to the social fabric of our community: service, church and community groups will decline, sport teams will struggle, clubs and businesses will fold and the community will suffer.

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.

While there still room for further water-saving measures within our industry, the Standing Committee must understand that much has already been done, and that Barwon-Darling irrigators have a significant motivation to maximise all cost-proven efficiencies.

Government on-farm irrigation efficiency programs have been of limited use to Barwon-Darling irrigators so far (mostly because they have not been targeted here). While these programs have advantages because some of the savings are retained by irrigators for use within the valley, there is reluctance among irrigators to return water entitlement to the Government for environmental use. Too much water has already been taken by recent cutbacks, and it is our contention that any efficiency savings should make up for these cuts.
In the Barwon-Darling, we have highly variable water reliability backed by our own off-river storages. This means that expensive irrigation infrastructure systems such as drip, lateral move or centre pivot systems are only going to appeal to a limited number of irrigators.

Recent forays into high value permanent crops at Bourke utilising micro-irrigation systems have had very poor to mixed results, mainly due to the highly variable nature of our river & rainfall.

For most of us, the most sensible irrigation efficiency project is to minimise the surface area of storages, to minimise evaporation losses. The surface area of these storages is so large as to make the capital cost almost impossible at this point.

There is no one ideal irrigation system for all circumstances, and we need to look at what works best in each local environment. Most often it is the irrigator who best placed to decide what works.

The irrigation industry on the upper Darling system is always investigating new water saving technology, and over the long term, the Australian cotton industry has been profitable enough to allow growers to invest in new technology.

Cotton growers continue to seek water efficiency through breeding of better high-yeilding, drought-tolerant plant varieties, improved irrigation scheduling, on-farm water reticulation, crop moisture monitoring, laser levelling and the investigation of polymer technology which has the potential to significantly reduce evaporation from water storages & canals.

Major infrastructure programs like urgently needed improvements to Menindee Lakes are one of pet wishes. Some studies say that engineering solutions have the potential to reduce evaporation losses from the Lakes by up to 200Gl each year. This should be a major priority and will make annual savings that can be used elsewhere for environmental and consumptive purposes.

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.

This sort of agricultural research is vital for the industry and the community; but should be a shared responsibility between industry and government.

It is also important to recognise that efficiency dividends from research are important in allowing agricultural industries to survive while there is falling terms of trade and a growing cost/price squeeze in Australian agriculture.

The magnitude of water savings proposed by the MDBA could not be made up from improved infrastructure & technologies develop by the research sector; but it can help.

Over the past 10 years the Australian cotton industry has significantly improved cotton lint production per megalitre of water used. Plant breeding has improved cotton yields, water losses have been reduced and irrigation systems made more efficient.

Without these improvements the viability of the Australian cotton industry would be questionable. Should further improvements go to more water for environmental flows? Or should it be used to further enhance the viability of the sector?

Rather than the latter, we believe there should be large investment in co-ordinating a national irrigation research program to build on these initiatives.

Water metering is a huge issue in the whole debate. On the Barwon-Darling we introduced time & event meters on all pumps by 1992 and then were required to install (at our own cost) ultrasonic MACE meters between 1998 and 2004. The problem is that these meters is that they have not been reliable and, in recent times, have not been properly managed & maintained by State Water and the NSW Office of Water.

Due to metering issues and disputes, the NSW authorities have not been able to provide water usage results to Barwon-Darling irrigators for the 2009/10 water year and there are still question marks and disputes over the 2007/08 water year. We are now well through the 2010/11 water year without knowing what our usage has been and how much carry-over water we have in accounts.

These problems mean that we need to introduce improved metering technology so that we can properly measure and manage river diversions.

In examining each of these issues, the Committee will also consider community views on:

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

We have covered much of this above, but would like to make a couple of points:

- Although the cheapest short-term way of securing water entitlement may be through direct purchase, there also a good argument to fund irrigation efficiency projects at higher cost than outright purchase. Water buybacks may be OK for the individual seller, but they take no account of the social & economic damage to communities when productive, job-creating capacity is permanently eliminated. The effect of the Toorale purchase on the village of Louth and more widely in the Bourke Shire is a good example. MMAC argues that spending above water market price on water efficiency projects can be justified to help ensure the social and economic viability of a region.
- We recommend that he Basin Plan must avoid simply considering volumes of water, and it must start to consider a number of projects to achieve environmental outcomes. These should include partnership with the irrigation industry aimed at enhancing the savings and efficiencies that have already been achieved.

Opportunities for economic growth and diversification within regional communities; and

There are more appropriate groups than MMAC to respond to this, but if the government really wishes to help communities like Bourke, there must be efforts made to compensate for recent losses in jobs and business opportunities due to recent cuts to water volumes & access.

Bourke,[and other communities on the Barwon-Darling, that have a heavy dependence on irrigation need genuine, long-term initiatives to create jobs and sustainable business diversity. In her Bourke case study Judith Stubbs quite rightly states that remoteness and lack of population and services mitigates against diversification. She state further that:

"Agricultural alternatives in the Bourke case study area are reported to be far more constrained by low rainfall and relatively poor soils in much of the Shire than in other selected case study areas in the MDB. The 'next best use' in times of drought or reduced water allocations is dryland grazing, with few opportunities for dryland cropping.

More recent attempts at diversification into higher value horticultural uses such as grapes and citrus are reported to have had a high rate of failure in the past 2 years, due principally to water insecurity,with at least two major horticultural enterprises in receivership".

Previous relevant reform and structural adjustment programs and the impact on communities and regions:

These have already been discussed above and also outlined in detail in the "Bourke Shire Case Study" by Judith Stubbs and Associates.

The full impacts of these cutbacks are still to be felt and their impacts assessed. We estimate that over 300 equivalent fulltime jobs have been lost in the industry in Bourke alone; jobs that will probably never be reinstated.

On the Barwon-Darling we have a recent history of government cuts to our licensed volumes and cuts to our access. This has all happened *without* access to structural adjustment programs. On each occasion we have asked for help in this regard for our communities, but have been denied.

Timing of Murray Darling Plan

MMAC also strongly believes that the development of the plan is untimely and ill-considered, and does not take into account the Water Sharing Plans and other water reform processes that have been developed by the States, especially in New South Wales.

Before rushing in and developing another plan; these existing water sharing plans and other reforms, and their impacts on local communities, should be independently and objectively assessed.

If the Government believes that the implementation of a Basin Plan is necessary at this time we recommend that it should follow the follow process:

1. Identify the environmental, social and economic priorities at each individual catchment level, including identifying measurable targets;

2. Identify a range of projects and management planss that could be applied, allowing a choice to optimise the social, economic and environmental outcomes;

3. Initiate selected projects management plans, utilising a continuous cycle of adaptive management improvement; and

4. Implement transparent measurement and reporting of performance against the targets.

In doing this, the government could require the Plan to move away from the simple answer of *"let's just take more water away from industry",* and consider a full range of activities that could achieve the defined social, economic & environmental outcomes.