

**Submission to**

**House of Representatives Standing Committee on Regional Australia**

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

from

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**December 2010**

*Issues Addressed in this Submission:*

**General Comments relating to the Basin Plan, including**

- Basis for Murray-Darling Basin Plan
- Modelling

**Terms of Reference of the Standing Committee, including**

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

Also,

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

**Summary**

### General Comments relating to the Basin Plan, including

- Basis for Murray-Darling Basin Plan

There was an amount of horror and alarm from this floodplain landholder of the Macquarie catchment while attending the local Dubbo "Community Consultation meeting" to hear a broad overview of the Draft Plan with and a token few questions answered from local residents when the microphone was available. During that meeting there was a great deal of time spent explaining about **volumes of water** required for the Murray-Darling Basin from residents of the catchments within the Basin, **no mention of water quality**, a brief note on the Powerpoint presentation about the **"health" of the Basin**, and **very little detail** (even despite a question from a long-term Macquarie River and Bogan River landholder) about specific requirements to achieve that "health" at a local and catchment level.

It was evident that the wealth of **local knowledge** about and involvement in management of the natural resources (including the water resources) of the Macquarie-Castlereagh catchment had not been sought nor welcomed, but instead the figures proposed for a 40% reduction in water use were calculated using hydrologic modelling by external consultants. The assumptions used for this modelling are of serious concern, addressed in a later section.

During the meeting the audience was challenged to question **confidence in "the best available Science"** used as the basis for the Basin Plan. This is a good point, and it is suggested that under the framework of the *Water Act 2007*, undue emphasis has been placed on water volumes (in fact to the extent of the Draft Plan being a recipe to "Just Add Water"). At the meeting and obviously in preparation of the report there has been **little utilisation of substantial and long-term local knowledge and experience** in natural resources management (including land *and* water management) in the Macquarie-Castlereagh catchment to validate or "ground truth" the Basin Plan; one can only assume other valleys throughout the Murray-Darling Basin are in a similar situation. This should be addressed as a matter of urgency.

In fact to achieve worthwhile environmental outcomes there has been a widespread acceptance amongst natural resources researchers and practitioners since the late 1980's that water resources management should not be carried out in isolation, but in fact "**integrated land and water management**" is much more effective in achieving optimal natural resources outcomes within catchments. The *Guide to the Basin Plan Vol. 1* (p.194) actually states that "the focus of the Basin Plan is on matters relevant to the management of the Basin water resources, and not the direct regulation of land use, natural resources other than water, or the control of pollution." This seems to be a backward step to be addressing only water, with little emphasis on water quality and much attention directed to the volumes of water to be directed to "**improvements to the overall health of the Basin**" (p. xxvi) via Sustainable Diversion Limits (SDL's) applied to other water users throughout the Basin.

Perhaps the figures have been missed, but throughout the *Guide* there seemed to be no mention of quantifying the "overall health" nor using Performance Indicators to measure what environmental gains to either **key environmental functions** or **key ecosystem assets**. Surely such **measurements** would be necessary to carry out a rigorous **Benefit/Cost Analysis** of implementing proposed changes before they occur, then in monitoring the success of the changes if implementation proceeded. Also, such measurements and quantification of values (for example, values attributed to different environmental assets) should be required to enable decisions to be made about trade-offs between conflicting interests upstream and downstream within the Basin; for example, prioritisation may be required for water going to the Ramsar-listed wetlands in the Macquarie Marshes versus the Murray Mouth flow requirements.

The other major underlying assumption of the Murray-Darling Basin Plan, or at least the *Guide*, lies in the statement that "**the environment has not had sufficient water** for decades. This has led to serious environmental decline in many parts of the Basin...." (p, xiv) The blame is laid at a range of consumptive water users throughout the Basin, who are now required to reduce their water use so that water can be "applied" to the environment. However, observation of the restorative powers of this year's rainfall (over twice the annual average) and the **current major**

**overbank / flood flows** on the lower Macquarie floodplain and further upstream would show substantially **increased biodiversity** with all its associated indicators. This is in comparison with the mid-drought years of the Sustainable Rivers Audit and ecosystem observations used as the basis for claims about ecosystem decline.

Another point which should be borne in mind in relation to the Basin planning process and proposed implementation is the fact that in the late 1980's, thanks to the work of the late Prof John Burton of the University of New England, Armidale, it became widely acknowledged that successful implementation of natural resources management planning was dependent upon a **"bottom up" approach, with substantial involvement and hence "ownership" by stakeholders.** In contrast, a **bureaucratic or legislative-based "top down" approach** (such as the process currently being undertaken) was much less likely to be successful in implementing changes.

- Modelling

It is understood that due to the shortness of the time frame for producing the Murray-Darling Basin Plan, the hydrologic modelling techniques used to arrive at the water volumes required for the environment were chosen as the **"best available science"** (p. xvi). "Best available" is understood to mean able to be used throughout the different catchments within the Basin, with compatible data available from the various State agencies, able to be used on existing computer systems, and supported by literature reviews.

There is serious concern, however, at the statement also on p. xvi that "The Authority acknowledges, however, that there are **inherent limitations with data analysis and hydrologic modelling of this scale and complexity.** Therefore, the Authority has **exercised its judgement** on matters such as proposals for SDLs." The question which should be asked when livelihoods and communities viabilities are at stake is **"Is this good enough?"**.

Another reservation about the quality of the modelling and data sets is the fact that there are known to be **inaccuracies and flaws** in the Macquarie-Castlereagh catchment data provided (which were the subject of unacknowledged comment by several peak valley bodies on the report's release) in the 2008 CSIRO Report from the *CSIRO Murray-Darling Basin Sustainable Yields Project*.

It is also suggested that the "broad brush" approach needed for the Murray-Darling Basin is an **over-simplification** and, like all good computer systems which operate on the "Garbage In Garbage Out" principle, is only as good as the very generalised assumptions used as inputs. In fact, the **ecology and hydrology** of even one of the 18 environmental assets such as the Macquarie Marshes is **complex** and not well understood nor adequately monitored or studied.

In the modelling and associated discussions much has been made of "**pre-development**" **conditions and flow regimes**. Does this mean any human habitation and activity? If so, this is unrealistic to incorporate in the modelling.

In the Basin Plan's assertion that valleys such as the Macquarie have been "**fully regulated**", there has been no acknowledgement of the **tributary inflows** downstream of the dam (for example, the Bell River, Little River, Talbragar River and Coalbaggie Creek all enter the Macquarie downstream of Burrendong Dam). Also, dams such as Burrendong Dam in the Macquarie valley serve an important function in **flood mitigation**, as evidenced in the recent flood event when 350,000 ML inflow into Burrendong Dam occurred in one day. In suggesting SDL's and volumes needed for the environment, there seems to be no account taken for the legislative requirements in the dam's operation of, broadly, evacuating the flood mitigation section as soon as possible while at the same time avoiding harmful effects downstream. There also seems to be no account taken in the Murray-Darling Basin Plan of other **legislative requirements of State agencies** which may impact on delivery of the volumes set in the Basin Plan (for example, minimum flow regimes required for discharge of towns' treated sewage effluent).

### Terms of Reference of the Standing Committee, including

- The direct and indirect impact of the Proposed Basin Plan on regional communities, including agricultural industries, local business activity and community wellbeing; and
- Opportunities for economic growth and diversification within regional communities

To specifically address the Committee's Terms of Reference, **local examples** will be drawn from our region on the lower Macquarie floodplain at Gin Gin in central western NSW, downstream of Dubbo and Narromine, upstream of Warren, and with the closest town being Trangie, population around 1000.

The **third generation family farming business** we operate is predominantly grazing, producing Merino and Merino x Border Leicester First Cross lambs, plus cattle, with dryland and irrigation cropping of cereals, oilseeds and fodder crops, and previously of seed crops (in years when irrigation allocations were available). During the recent years of drought we have not employed casual labour except as needed from family members in peak times, but have used livestock and harvesting contractors to supplement one full-time labour unit. Fortunately sheep have remained a major part of the business operation, whereas many neighbours were intensively developed for irrigation cropping of cotton, oilseeds and cereals, without the fences and infrastructure to return to livestock enterprises.

In recent times the nearby towns, mostly under 5000 population, have seen a substantial downturn in business as **rural employment** was less available and families left the district. In one nearby town about five years ago when irrigated cotton areas had reduced, it was quoted that about 45 families had left the small town, and two fuel distributorships had been amongst the several business which had closed in the town. A few businesses have been in a position to **adapt**, eg rural suppliers providing a wider range of chemicals and fertilisers than previously when only supplying cotton growers. Other businesses were not so fortunate when the turnover was reduced.

According to the Guide to the Murray-Darling Basin Plan, our area is in the midst of those **smaller centres** substantially reliant upon irrigated agriculture **most likely to be affected**. Not only are businesses likely to be affected, but as we have already seen in drought years, there are **flow-on effects** in the provision of services, particularly **health and education**. As we have seen in several nearby towns, families leaving the area mean a reduction in student numbers, loss of teachers to the local school, fewer qualified to teach specialist subjects resulting in less opportunities and subject choices in the local school, amongst other effects.

Similarly there are concerns that a reduction in population may have a flow-on effect with a lower rating base for **local government** entrusted with providing services to residents living in the towns and their surrounding district with its associated roads network.

This prediction from the Basin Plan unfortunately provides a **bleak outlook** for the future for us and our four children (all still being educated, two at university and two still in secondary school), who may or may not opt to return to take over the family farming business. Just as we had thought the worst of the drought years being over might mean we had a chance of repaying accumulated debt, had the now underwater oats and barley crops had a chance of being harvested.

The Socio-Economic impacts on small communities in our region of proposed changes to be implemented through the Murray-Darling Basin Plan will be substantial, although understated in the Basin Plan. We have serious doubts whether these communities and small businesses reliant upon them will have the **resilience to withstand such a negative impact** on the conduct of their businesses as proposed in the Basin Plan, simply because of their size and the fact that they are so reliant upon irrigated agriculture which has traditionally produced food and fibre for domestic and overseas consumption.

In our district we have already seen recent purchases of neighbouring properties by **overseas investors** in corporate agriculture, recognising the production potential of this area and prepared to pay acceptable prices.



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### Summary

We have serious concerns about the assumptions made, the modelling used and the judgements exercised by the Murray-Darling Basin Authority that are the basis for recommendations in the Murray-Darling Basin Plan and its Guide.

Before any implementation of the Plan, these points of concern should be addressed and more accurate and detailed data for each valley within the Murray-Darling Basin, undertake serious (as opposed to tokenistic) consultation with local communities using their extensive knowledge base. Then an extensive Benefit/Cost Analysis and a more detailed and accurate investigation of quantified Socio-Economic effects could be completed.