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Committee Secretary
Senate Standing Committee on Rural Affairs and Transport
PO Box 6100
Parliament House
Canberra ACT 2600

SENATE INQUIRY INTO THE MURRAY-DARLING BASIN PLAN BOURKE SHIRE COUNCIL'S SUBMISSION

1. DIRECT AND INDIRECT IMPACT ON REGIONAL COMMUNITIES

1.1 Socio economic fallout during the process

The proposed Basin Plan aims to develop balanced environmental social and economic outcomes. The environmental outcomes will be very slow to deliver. However, the social and economic consequences are immediate. These include:

- The anxiety and concerns which have been expressed since 8th October are the beginning of this, with ongoing emotional, mental and interpersonal stresses obviously going to continue until a final determination is resolved. *(An indicator is our Local Pharmacist who now sells nearly twice as much medication for anxiety/depression related conditions as he sold 10 years ago). (See Attachment A).*
- We can expect immediate paralysis in any ability of any businesses within the Basin, whether directly or indirectly involved in water management, to develop and implement business plans, and
- Banks and other financial lenders have been accused of immediately adopting a worst case scenario risk assessment.

The Government and the Murray Darling Basin Authority should not and cannot ignore the socio economic consequences of the events the MDBA has put in place from the 8th October when the Guide was released until the date any final decision will be made. These consequences must be actively managed by the Government MDBA as part of the process for which they are responsible.

From observations across this valley during the decade prior to the decision on Cap, the period of indecision caused more socio economic fallout than the final decision itself.

A report prepared by Judith Stubbs titled *“Bourke Shire, NSW Case Study Exploring the relationship between community resilience and irrigated agriculture in the Murray Darling Basin: Social and economic impacts of reduced irrigation water, July 2010”* can be provided on request. This report clearly highlights the social and economic impacts of changing policy.

A primary message in relation to the Basin Plan is that we should not and cannot expect to see immediate or short term non human environmental outcomes for any change in policy, yet there will be rapid and long term socio economic changes from the policy interventions.

1.2 Closing the Gap

The Guide makes regular references to decrease in business, and therefore employment opportunities, and on P 98 it highlights that *“there is a greater likelihood that:*

- *Access to health services and education will become more difficult*
- *There will be less funds to maintain community infrastructure, and*
- *Social and community networks will come under increasing pressure”.*

All these outcomes are diametrically opposed to the Whole of Government commitment, policies and programs aimed towards “Closing the Gap” for our Aboriginal people.

If ever there is a need for a more balanced approach, this is one, rather than driving the people towards a need for a Northern Territory style intervention, whilst focusing solely on a single environmental agenda.

1.3 Human “givens” in the environment

The Guide is not consistent or transparent in its goals of identifying which communities are “protected” from intervention and which ones are to be affected. It implies that some concentrated aspects of human involvement are “givens” within the implied definition of environment, whilst the majority of human activities along the length and breadth of the system are not.

Examples of this implication include augmentation of the water supplies to two capital cities outside of the Basin, namely Melbourne and Adelaide, the man-made structures of Barrages at the mouth of the Murray and diversions at Menindee Lakes, and the large drainage systems into the Coorong.

The proposal should be more explicit on which human interventions are “givens” so it is transparent that some regional communities are protected, whilst others will suffer at their expense.

1.4 Toorale

The experience of the Commonwealth Government's purchase of water entitlements from Toorale Station in 2008, with simultaneous purchase of the land as a National Park highlighted the direct and indirect impacts of a major buyback on a regional community. Using a variety of tangible and intangible indicators, it was estimated to have an overall negative impact of 10% on the Bourke Shire community and businesses. Attachment B is a summary of a report prepared by Bourke Shire Council for the property Toorale in relation to an estimate of the input costs for the Toorale business operations. This report indicates that the annual input costs for the Pastoral and Irrigation Enterprises are at least \$4,700,000 excluding labour. The report makes comments in relation to the implications of Toorale being converted from a commercial business to a National Park or Conservation Area.

Detailed economic data can be provided to support this example on request.

2. OPTIONS FOR WATER SAVING MEASURES, WITH CONSIDERATION TO ANALYSIS OF ACTUAL USAGE VERSES LICENCE ENTITLEMENT

2.1 Give water sharing plans time to work.

Over the last decade or so, many valleys devoted years of consultation and planning to develop water sharing plans which had triple bottom line outcomes. In the case of the unregulated section of the Barwon Darling river system, this planning culminated in an agreement with the State Government in 2006, with annual licence entitlements being reduced from 523 GL to 173GL.

Despite Government commitments, a water sharing plan has not yet been finalized for this valley.

It is critical that the Water Sharing Plan agreement be finalized and given a time to run its due course before pre-empting that it will not deliver on the environmental outcomes expected, or pre-empting that the environmental outcomes will be less than now required under the Basin Plan

2.2 Focus more on water efficiencies, and less on buybacks.

Water efficiencies involve local stimulus spending, and the outcomes are likely to have positive socio economic outcomes, whereas money spend on buybacks is likely to leave the district, and the outcomes are likely to have negative socio economic outcomes.

- *From a Darling River system perspective, the State and Commonwealth Governments and MDBA must commit to modifications at Menindee, and for these savings to be modelled immediately, and taken into consideration as part of the claw-back, even if the modifications do not occur for several years.*
 - Modifications include purpose built efficient water storage for Broken Hill city, separation of storages between each lake, and priority storage in the deepest lake, with new works to allow it to drain completely into the Darling River.
- *Similarly, from a whole of Basin perspective, structural adjustment actions must be planned to occur for the Lower Lakes, and the modelled savings be factored into the claw-back considerations.*

2.3 IQQM

The MDBA and Independent Audit Group use information provided by the NSW authorities developed through use of the IQQM.

However, the IQQM provided flawed information. Further, it is in inappropriate model for annual monitoring.

In regard to the Unregulated Barwon Darling River system, the NSW Minister for Natural Resources agreed in 2006 that the IQQM data analysis would be reviewed, taking into consideration a number of factors. Despite this, no such review has formally been completed. Only on 22nd November 2010, the NSW Authorities casually informed some members of the valley community that a partial review has established a 14.5% error in the original analysis, and that additional parts of the promised review have still not been undertaken.

The simple message in this is that the analysed modelling information on which much of the Basin Plan considerations and conclusions have been made has been established to have significant errors, thereby leaving open to question the relevance of many of the assumptions and conclusions.

An alternative to the model currently in existence, the IQQM, must be found if annual monitoring through modelling of extractions is expected.

The IQQM was never designed for unregulated rivers, it is designed only as a long term indicator of change on regulated rivers, and it can only be applied retrospectively.

It is impossible for any industry to work cooperatively and prospectively with authorities reliant on such a monitoring tool.

2.4 Licence entitlement, Licence access and actual usage

Water buyback of licence entitlement is a very blunt tool on a highly variable flowing river system, yet the focus of the proposed Basin Plan is on buyback.

Water licence access is controlled through licence conditions determined through Water Sharing Plans. At least for the Barwon Darling system, the most significant conditions relate to commence to pump thresholds. These thresholds have been determined for each class of licence (based on size of pumps) for each section of river, thereby providing protection to certain flow conditions designed to achieve environmental outcomes.

Actual usage is determined by a combination of entitlement, access conditions and capacity to use the water even if available. The capacity to use is influenced by off-river storage capacity, financial capacity, need, and physical access to the pumps when needed. Off river storage capacities have been further regulated to minimize opportunities for growth.

2.5 Barrages near end of system

In summary, the environmental consequences created by white man interventions around the end of the system need to be identified and appropriately attributed.

There are then two choices, which need to be publicly stated.

One option is to directly address the causes, which would no doubt involve modifications to the white man interventions. This would be expected to involve major water saving measures and outcomes.

The alternative is to admit that the white man interventions are givens, and to accept the environmental consequences, perhaps with tweaking around the edges, but not expect to use wrong solutions in an attempt to address the accepted problems.

The Guide makes insignificant references to the Barrages near the end of the system, yet places significant emphasis on the environmental degradation around this site. As an example of the insignificance placed on the barrages, there is no reference to their construction in the timeline of significant events printed on Page 25 of the Guide. As an example of the emphasis placed in the Guide to addressing the environmental degradation around the site, Page 74 of the Guide proposes that 1,960 GL of the 3,000 GL of additional environmental water is to flow out of the Murray Mouth.

For the Guide to be a credible document, these issues need teasing out.

From our perspective, the following summarises these issues. Our Council will appreciate our perspectives being confirmed by the MDBA or your enquiry, or alternatively corrected, to allow for meaningful ongoing constructive communications:

- *The natural environment around the end of the system was that the Murray mouth, like every other coastal river in Australia, and presumably the world, was a “tidal estuary”, with the degrees of sea water encroachment up the river system and the degrees of freshwater outpouring into the sea directly correlated with the volume of natural freshwater flow coming down the river at any point in time. (It is understood that Matthew Flinders did not sight the Murray mouth during his circumnavigation of Australia and that Charles Sturt recorded salt water a significant distance upstream from the Murray mouth).*
- *In the natural environment, the level of water at the Murray mouth, in the Coorong and in the Lower Lakes was presumably always at approximately sea level. The water salinity in these areas varied significantly.*
- *In the natural environment, this consistency of depth ensured a degree of flushing of the Murray mouth, one way or the other. However, the natural environment also involved the actual Murray mouth varying in location due to ever changing movement of sand.*
- *The barrages were constructed approximately 75 years ago to change this natural environment, by providing a barrier to defend the encroachment of sea water up the river system. They were not built as a normal dam or weir, designed to maintain a regular depth of fresh water, rather their purpose was to allow the available fresh water to remain uncontaminated by salt water.*
- *There are obviously a number of environmental side effects from the intervention of the barrages, yet these do not appear to have been captured, or have been glossed over, in the Guide. (For example, Page 3 of the Guide quotes: “In 1981-83, the Murray Mouth closed for the first time since regulation of the river system, leading to*

an increased awareness of environmental water requirements, particularly during droughts". It may have been just as relevant to have quoted: "In 1981-83, the Murray Mouth closed for the first time since the barrages were constructed", and then questioned whether the barrages had any causal association.)

- *There are also a number of socio-economic developments as a consequence of the "security" provided by the barrages. One of these appears to revolve around an expectation that there should always be a "weir" or "dam" of fresh water upstream of the barrages.*
- *From the information provided and easily available to the wider public, it appears that the "solution" proposed to address the environmental concerns at the end of the system will not address the primary cause. As such, there remains concern that in decades to come, there could be every reason to need to again address these environmental concerns.*

3. ROLE OF GOVERNMENTS, INDUSTRY AND RESEARCH IN DEVELOPING AND DELIVERING INFRASTRUCTURE AND TECHNOLOGIES

3.1 Model environmental flows, not diversions

If any modelling is to occur on an annual basis, it should be of environmental flows, not of diversions. The thrust of the Basin Plan is to achieve environmental flows under varying flow conditions, so if any modelling is necessary, it is these environmental flows; which should be modelled against predicted outcomes.

The IQQM is the tool currently used for modelling diversions, but it was never designed for unregulated rivers or for annual monitoring. It is designed only as a long term indicator of change on regulated rivers, and it can only be applied retrospectively.

It is impossible for any industry to work cooperatively and prospectively with authorities reliant on such a retrospective monitoring tool.

Annual monitoring and analysis of actual diversions may be appropriate, but modelling of annual diversions as an annual management tool is totally inappropriate, at least on unregulated rivers using the model programs currently available.

3.2 Are upstream diversions the primary cause of negative environmental symptoms in the Lower Lakes and Mouth of Murray region?

No compelling evidence has been provided to establish that upstream diversions are the primary cause of negative environmental symptoms in the Lower Lakes and Mouth of Murray region (end of system).

Conversely, no compelling evidence has been provided that reductions in upstream diversions on the Darling River system, no matter how great, will address the primary negative environmental symptoms at the end of the system.

By way of example, whether all diversions from the Darling River system were either terminated or left unchanged, there is little evidence that the environmental symptoms at the end of the system would be significantly addressed.

No confidence has been provided that if the proposed Basin Plan is implemented, even at the upper limit of 7,600 GL per year of additional surface water for the environment, then the environmental symptoms at the end of the system will be permanently addressed.

Put simply, it is easy to conclude that the proposed Basin Plan is using the wrong tools (wrong “causes”) in an attempt to address environmental symptoms at the end of the system.

3.3 Causal associations between human interventions and environmental degradations

There does not appear to be any references in the guide to indicate whether there is, or is not, any causal association between these accepted, or “given”, human interventions and the stated environmental degradations, yet the majority of the document focuses on human interventions throughout the remainder of the Basin system, avoiding references to these apparent “givens”.

It is critical that the actual “environmental concern” be clearly defined, its cause accurately established, and then ensure the strategies proposed will address the causes, not the symptoms.

3.4 Recognition of flow variability

Insufficient consideration appears to have been given to the importance of flow variability, particularly in the Darling River system. To some extent the Guide implies that flow variability may be a bad attribute needing to be addressed.

The natural variability in flows, particularly in the whole of Darling and Lachlan systems, (more northern systems), is far greater than the recommended reductions in the Basin Plan. Whilst this variability needs to be maintained, it provides greater opportunities to influence end of catchment flows and simultaneously contribute to responsible diversion approvals than any simple buyback strategies.

Hence it is more important for emphasis to be placed on managing diversion during different patterns of flow variability to deliver environmental outcomes than it is to focus on buyback of licence entitlement. Managing flow variability is achieved through effective water sharing plans and access entitlements. Buying out entitlements is a very blunt tool relative to the flow variability fluctuations.

3.5 Holistic Government responsibilities and representation

The Bourke Shire Council, like all other local governments across the Basin, has responsibilities for delivering on whole of government and community obligations, which fundamentally include environmental, economic, social and cultural balances. Our Council

is committed to work with all other levels of government, and with all government and non-government agencies, in achieving these outcomes and balances.

By contrast, our Council will object to government reform which takes a silo approach without consideration of the holistic consequences.

The Bourke Shire Council is committed to work progressively, constructively and cooperatively with the MDBA and with all other levels of Government if the MDBA and Governments are prepared to work with Bourke Shire Council.

3.6 Separation of drought from Human impacts

There is no clear indication of the relative impacts of diversions compared to extended drought during the timeline in which the accelerating environmental degradation in the Basin has been apparently occurring.

There are strong references to the expanding water diversions, and over allocations of water extractions from the system, and this is acknowledged, and its significance not denied.

Some reference is made to the extenuated drought over the last decade, but little attempt has been highlighted to separate the relative effects of drought from over-allocation.

3.7 Carp

It is amazing that the entire emphasis of the guide is focused on water diversion considerations as the cause of all environmental degradation.

There is virtually no reference to the introduction of carp into the system during the same period as the allocations of water licences were increasing, particularly in the Darling system, or of any assessment of the role, if any, of carp as a contributor to the cause of the symptoms attempting to be addressed.

Hence the question must be asked: "What confidence is there that increasing the volume of water for environmental requirements, particularly at the Murray Mouth, will address the environmental symptoms if their cause is something other than diversion volumes?"

3.8 Alternative strategies to end of system flows

Increasing end of system outflows can be a bad indicator, and should not be the only indicator, in achieving environmental outcomes.

For example, a full river in the upper Darling catchment, without breaking its banks, may result in over 80% of the volume reaching the end of system outflow, whereas when there is a larger flow with over bank flood-out, maybe only 30 to 40% may reach the end of system outflow, yet the floodplain environment is enhanced. (The Queensland floods in March 2010 are a good example.) These floodplain soakage's need to be counted towards the environmental flows.

The points with this statement are:

- Strategies other than maximizing end of system outflows, such as consideration of maximum pump sizes and commence to pump thresh-holds, may be more beneficial, and
- Overland floodplain flows need to be attributed to environmental water.

3.9 Effective implementation

No matter what the final Basin Plan may look like, it is imperative that there are adequate resources pre-planned and committed to ensure its effective implementation. The experience with Cap implementation in the Barwon Darling valley is a salient example.

Coinciding with the announcement of Cap, the State Department undertook a staff rationalization.

As a consequence, four years later, there is still no accompanying Water Sharing Plan, no ability for trade, no continuous accounting or carry-over, and no full review of the IQQM, the model on which the entire change was based, despite all these being promised by Government as integral parts of the Cap decision.

There was also an assumed change of personnel in key places in the MDBC, which appears to have resulted in reversing a commitment to the agreed Cap strategy. The same mistakes on delivery should never be made again.

3.10 Climate change

The guide makes reference to climate change, and assumes a uniform across the basin negative river flow impact, recommending a 3% reduction in diversions.

It is asked what consideration has been given to the NSW Department of Environment, Climate Change and Water publication titled NSW Climate Impact Profile, which includes conclusions that:

- *“The intensity of significant flood events is likely to increase even when seasonal or average rainfalls are expected to decrease, and*
- *In the New England, North West and Western Regions of NSW, (which basically covers the top two thirds of the Basin in NSW,) run off and stream flow are likely to increase in summer and autumn, and decrease in winter and spring”.*

Presumably, similar research has been undertaken in the Queensland section of the Basin, and drawn similar conclusions.

3.11 Salinity

There appears to be some ambiguity in the Guide regarding references to salinity.

Recognition needs to be given to the fact that salinity is a natural occurrence in some parts of the system. For example, when Charles Sturt first discovered the Darling River near Bourke on 3rd February 1829, he wrote in his diary that: *“..... the looks of terror and disappointment with which they (the men) called to inform me that the water was so salty as to be unfit to drink”*. In 1892/93, Henry Lawson, in his poem, “The Song of the Darling”, quoted: *“The salt-springs bubble and the quagmires quiver,*

And -- this is the dirge of the Darling River". Obviously, these references to salt were recorded before any white man interference in the natural environment.

A very clear goal and strategy needs to be developed in relation to identifying and responding to natural environmental verses white man changes relating to water quality issues, such as salinity.

4. MEASURES TO INCREASE WATER EFFICIENCIES AND REDUCE CONSUMPTION

4.1 Menindee

As recorded above, From a Darling River system perspective, the State and Commonwealth Governments and MDBA must commit to modifications at Menindee, and for these savings to be modelled immediately, and taken into consideration as part of the claw-back, even if the modifications do not occur for several years.

- Modifications include purpose built efficient water storage for Broken Hill city, separation of storages between each lake, and priority storage in the deepest lake, with new works to allow it to drain completely into the Darling River.

5. OPPORTUNITIES FOR ECONOMIC GROWTH AND DIVERSIFICATION

5.1 Limited Capacity

It is essential to understand that in low rainfall areas of the Basin, land developed for intensive irrigation may have a negative value for any other purpose if the irrigation is terminated for any reason, including water buyback.

In low rainfall areas, it is not possible to convert the land to alternate uses such as dry land farming, grazing or conservation unless there are major capital investments made which would be far greater than the final value of the land.

Additionally, any final use of the land will be far less intensive, and therefore produce less economic productivity than the original irrigation use.

5.2 Match Buyback Investment with Community Investment

As an ambit claim, it would be appropriate for Government to make a \$ for \$ investment into "the Community" for every dollar spent on water buyback. This ambit claim was submitted by Bourke Council to the Government at the time of the Toorale buyback in 2008, but never responded to.

The following was the resolution submitted:

- *"For every dollar spent by the Commonwealth or State Governments on any of the programs for water buyback of active water or for expansion of land into the national reserve or national parks system, at least a similar amount of money should be committed by the respective governments for community adjustment to address the socio-economic consequences.*
- *The community adjustment programs should be developed in association with the local community."*

6. PREVIOUS REFORM AND STRUCTURAL ADJUSTMENT

6.1 Betrayal and time to evaluate outcomes of policy change.

People involved with development of Cap implementation on the Barwon Darling feel betrayed by the lack of recognition given in the Basin proposal to their work on the unregulated Barwon Darling system, from Mungindi to Menindee, to deliver balanced environmental, economic and social outcomes.

Over a decade of representation and leadership was given by many people. Personally I was acting on behalf of the State Government, supporting the Commonwealth Government and MDB Commission's drive for policy reform.

The process lead to massive reductions in licence entitlements and changes in access conditions along the Unregulated Barwon Darling system.

This was resolved in 2006, and introduced in July 2007, yet has had insufficient time to demonstrate its effectiveness.

There are three messages from this:-

- Firstly, much ground has to be made up to re-engage community people who have limited trust in Government reform commitments.
- Secondly, as stated previously, a primary message in relation to the Basin Plan is that in any system renowned of its massive variability, we should not and cannot expect to see immediate non human environmental outcomes for any change in policy, yet there may be rapid socio economic changes from the policy interventions.
- Thirdly, whilst NSW took this action over a decade, culminating with retrospective decisions announced in 2006 without "compensation", Queensland, on the same river systems, deferred their starting point, such that any similar constraints in the future will be eligible for "compensation" through buyback arrangements.

6.2 Toorale Experience

In again quoting the Toorale buyback experience in 2008, attachment C is a proposal put to Governments by the Bourke Shire Council seeking structural adjustment support. None of these recommendations were responded to, nor considered by Governments.

7. GENERAL POINTS REGARDING THE PROPOSED BASIN PLAN

7.1 International moral obligations

An implication of the Guide proposal is that we must protect the basin in our own back paddock of Australia, even if this means less production of food and fibre on our own continent, with the need for increased imports from overseas.

Because "overseas" is not in our back yard, we do not care or question if the imports are from third world countries or other communities which are seriously degrading their environment, or exploiting their people.

Morally, this is totally unacceptable.

Ethically and morally, it is far preferable for us to be in control of our own destiny, which can be achieved through acceptance of an effective balance of economic, social, cultural and environmental considerations.

7.2 Complex system requires complex solutions

The Guide contains a lot of detailed information, highlighting that the Murray Darling River system is a very complex. From this, it is logical to conclude that the management of the Murray Darling River system is similarly a very complex matter.

It is disappointing that a simplistic proposal is that a singular outcome to overcome all the apparent problems (environmental degradations) is to increase the water flows to the end of the system, ultimately to the mouth of the Murray.

7.3 Accelerating degradation

The guide uses words such as *“accelerating environmental degradation in the Basin”* (P4) and *“unless action is taken now, the Basin and its communities do not have a long term future, and consequently face irreversible decline in the environmental health, and in turn the economic strength of the Basin”* (P25).

However, the Guide is not convincing that there is this accelerating degradation, or irreversible decline, certainly no worse than in all other parts of our continent. There is continuous change within the Basin, as there is in every part of the planet, whether occupied or unoccupied by humans. It also accepted that there has been a degree of over allocation of licences.

How does the rate of accelerating environmental degradation and irreversible decline in the Basin compare to that of the environmental health of our capital cities or any other part of our continent? Is this another case of the voice of the 17 or 18 million people in our capital cities avoiding looking in their own back yard, but wanting to influence change elsewhere?

7.4 Definition of “environment”

We are fooling ourselves if we believe that human beings are separate from the environment, and not an integral part of it. Why is it that *“invertebrates, fish habitats, and bird foraging and breeding”* can all be classified as part of the environment, yet people are not?

If “environment” is not defined in the Water Act as including people, it should be.

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Encl.