To,

Senate Enquiry.

My name is Les Worland and I have lived in the Griffith region since 1965 and have a background in both engineering and the wine industry.

Please consider my comments on the Draft Murray Darling Basin Plan.

The MDB is the food bowl of Australia and provides 30% of the nation's food and $15 billion each year to the economy. The towns in the region rely on water for their industry, social and economic lifestyle. It is the lifeblood of these towns.

The Federal Government wants the Australian population to increase up to 20M in the next 50 years. Who will feed them and will they be forced to live in our now over-populated and under resourced capital cities (If they can afford it)? The Australian inland was a desert before white man came over 200 years ago. We'll be heading back that way without some sort of balance between food production and the environment.

The cuts outlined in the Draft Basin Plan would see towns in the MDB decimated and would have a flow on effect to associated industries and professions not only in country towns, but eventually across Australia.

The statistics stating that 800 jobs would be lost shows a complete lack of understanding of why we live in an irrigation area. We exist here because of the availability water! To then say we could simply relocate and find alternative employment is totally unrealistic and an insult to the pioneers who struggled through adversity to open up inland Australia for food production.

The independent Stubbs Report showed reductions in water allocations of the 27– 37% range mentioned in the Basin Plan draft could result in more than 5000 people in this region being put out of work plus about a billion dollars in lost production revenue.

I'm surprised that the Labor Party, who went to the last election on a platform of supporting regional Australia, is behind an agenda which would put 1000's of people out of work and force people to leave country towns.

Governments have spent billions of dollars on desalinization plants as the dams weren't full during the drought and city water supplies were threatened. Since their construction, we've learned that these plants are highly inefficient and use huge amounts of power and are often strategically located close to sewage outfalls e.g. Sydney, (and what do they do with the salt?).

Quite obviously they were constructed to provide water security for our capital cities. But they don't put one drop of water into our rivers to help the environment or grow food. The plants are working today even though the dams are full, rivers overflowing and widespread rain experienced over SE Australia has extinguished the drought.

The same result could have achieved by spending the money on strategic water storages and dams. The last large dam built was in the 1960's despite the fact that Australia is the driest inhabited continent on earth and well known for its consistent periods of drought.

In the great droughts of the 19th and 20th centuries, especially the Federation Drought of 1895-1902 (very similar to the last drought in longevity) the Murray and the Darling were dry for long periods.

For millenniums, the Murray River had run seasonally, with big floods in Winter and Spring, until it dried up once again during the devastating drought of 1914-15. A widely circulated and still available picture at this time, shows people in horse and buggies posing in the dry bed of the Murray.

People along the river complained, politicians said this must never happen again. The answer was seen to be regulating the river with dams and weirs and the River Murray Agreement was formulated. Regulation of the river began in earnest in the 1930s.

Many times in this new millennium due to the extreme drought, some of our major rivers ceased to flow in many areas, even with the irrigation structures in place to regulate water flows. It becomes evident then, that without these structures, the Murray and many other inland rivers would have stopped flowing once again. Despite the recent longest period of below average inflow since records were kept in 1962, a continuing stream flow was maintained for almost all city, town, industrial and rural use in line with the original Murray River Agreement.

Water first flowed in this area when the Murrumbidgee Irrigation Scheme was completed in 1913. The delivery of water to the region is based on a **gravity** system of open unlined channels that is antiquated and has been in need of upgrading for many years.

Seepage, leakage, evaporation, losses at offtakes and conveyance costs associated with open channels make up a total water loss of about 30% each irrigation season. Very little has been done to improve the efficiency of this delivery system since the inception of the Scheme.

I have lived and worked in the Murrumbidgee and Coleambally Irrigation areas in excess of 40 years. I was a Registered Surveyor for over 25 years in this region specialising in the design and construction of irrigation layouts including total farm designs, landforming, recycling schemes and water storage all based on a gravity system, which is still the most efficient system of delivering water.

Riverina farmers over the years have systematically upgraded their watering practices on farm at their own expense, employing modern technological advances and improved watering regimes for increased efficiency.

Examples would be tile drainage, twin furrows, laser landforming, on-farm recycling, partial rootzone drying, regulated deficit and drip irrigation to save water and improve on-farm efficiencies. These farmers are now going to be penalised for their considerable outlays and water saving efforts, whilst an outdated delivery system remains a primary culprit.

Government water buy backs might be good for farmers wishing to sell, but the benefits from these sales do not necessarily flow through to strengthen the social and economic fabric of our rural community. And what if there aren't enough "willing sellers" which are in most cases "desperate sellers?" Where will the water "required" come from then?

Irrigation farmers have never had control over "allocations" and have become the scapegoats in this plan and in the continuing political rhetoric. During the recent devastating drought, irrigation water was rarely available and most farmers received no allocation. If water is not available, what benefit is there to the environment in buying up entitlements? You are just buying pieces of paper.

And just what is this grab from high security water allocations going to achieve for the environment when water is available? It's not much good of putting water down a river just for it to run out the other end, if it is not doing some good along the way.

No-one has seen a factual report outlining the benefits gained by putting additional water down the rivers. How did the MDBP arrive at the percentages quoted in the Draft Basin Plan without an environmental plan? Where is the MDBA's environmental plan? We haven't seen one yet, so how did

they determine the size of the cuts in each individual catchment and determine the economic and community impacts these water recoveries will cause?

Annual follow up reports should be produced showing that benefits for the environment from the additional flows are being achieved and the socio-economic impact on the towns in the region, caused by the reduction in irrigation entitlements.

Increasing water flows down rivers would be highly unlikely to help the environment per se and would simply flow into the sea. The floodplains as we all know are **outside** the river banks, which can vary from 8 to 13 metres above normal river flow. So it will only be in times of **flood** that these ecosystems or "wetlands" would receive any water. This is what nature decrees.

The MDBA is advocating that these wetlands could receive water by pumping. But would they then want to keep them wet no matter what? This would not be the **natural** occurrence these depressions have experienced over hundreds of years. Normally, they become wetlands only in a **wet year** when the rivers are full and flooding. Many low areas became "wetlands" after the advent of irrigation.

The existing water storages do not have the capacity to consistently put water over the river banks to service these "wetlands" without help, and at the same time sustain food security. The river gums generally survive during periods of drought as they have done for centuries and regenerate when natural rainfall occurs.

Fish and bird life are affected but certainly come back quickly once the rains return, as is evidenced at the moment (November 2010). There are far more fish and birds around now than there were before we put the dams and weirs on our rivers. Witness the fishing industry established by the barrages constructed on the lower lakes around Goolwa SA.

Do we know what we want the river to look like in the future and what is the definition of a healthy river? Surely each inland river in the MDB would have its own individual requirements to stay in a "healthy" state.

There have obviously been too many water licences issued for river pumpers. Until the late 1980's rice was only allowed to be grown in the Coleambally and Murrumbidgee Irrigation Areas. The areas began at 50acres and were expanded to 60 acres in Coleambally and the MIA, with some of the larger area outlying farms e.g Warrawidgee allowed to grow 80 acres. A five year on-farm rotation was enforced for salinity control.

This was strictly policed with aerial photographs being taken by the WC&IC to check acreage planted and paddocks sown each season. Plus five percent was the allowable tolerance (due to distortion in the photographs) and growers over this amount were forced to cut off the water to that over-planted area (usually the last or lowest bay).

Until 1988 the Department of Land and Water Conservation only allowed rice production on these government irrigation areas and districts. The closed Japanese market for rice opened up to imports in 1993, following a disastrous growing season and rice from the US and EC gained access to both Japan and Korea. Australia also benefited with existing rice growing regulations being relaxed across the board.

I have seen the expansion of irrigation from these two designated areas since deregulation, which meant that irrigators could pump directly from the river and irrigate large acreages on the main stem of the Murrumbidgee and the Yanco-Colombo-Billabong effluent system, outside of the designated irrigation areas. The State Government must take some of the blame for the excess of water taken from our rivers as they issued the licences in the first place.

The MDBA believes Australia's problem is "water shortage". I know it should be "water management". We are consistently told by academics and "scientists" that we will have to do more with less in the future. Why do we have to have less? There is plenty of water in Australia. What we have to do is manage it.

When it rains, we have to capture and store the excess. Money has to be spent on infrastructure to ensure our future needs and survival. This should have been done years ago, but until this last record drought, money for additional inland water storages has not been a budget item with any State or Federal Government.

Barren Box Swamp 28kms north-west of Griffith, is a great example of a water and wetland storage within the Murrumbidgee Irrigation Area (MIA) used for balancing operational water demands. The previous storage was shallow with a broad surface area covering 3,200 hectares. Murrumbidgee Irrigation (MI) has completed works that deepened the storage and reduced its surface area. Water loss due to evaporation was markedly reduced. At the same time the now unused portion of the swamp was returned to ephemeral wetland.

The results:

- Achieve 20 gigalitres in water savings which can be returned to the river system for use in environmental flows.
- Improve the reliability of supply to the Wah Wah Irrigation District.
- Restore a more natural flooding regime, and therefore ecological system, to the area dedicated to the rehabilitation of the Barren Box ephemeral wetland.

The Barren Box Swamp project also creates:

- An active storage cell covering 1,230 hectares (30% of current area) with a storage volume of 24,000 ML at full supply level.
- An intermediate storage cell covering 320 hectares with an effective storage volume of 4,000 ML (10% of current area).
- A wetland cell covering approximately 1,650 hectares (60% of current area).

None of these savings have been acknowledged in the Draft Basin Plan and Murrumbidgee Irrigation was not involved in its conception.

Another significant feature in the Murrumbidgee Valley is the Lowbidgee area. This area features inorganic farming using opportunistic (non-regulated) water supply available during **supplementary (high flow)** events. And what makes the Lowbidgee wetlands unique through these years of drought is the landholders who have become environmentalists and bird lovers.

The Lowbidgee along with the adjoining Great Combung Swamp makes up one of the most significant wetland habitats for water birds in Eastern Australia, but would only receive water in times of **excess flows**.

A mega breeding event is happening at the moment (Nov/Dec 2010) in the Lowbidgee wetlands. This has been helped by farmers who have **given up some of their water allocation** and diverted flows through channels and levee banks to deliver the essential requirements for bird breeding and survival. These farmers manage the water in times of excess flow creating a positive outcome for thousands of birds. They are the true environmentalists and there's not a "scientist" or an academic amongst them.

As an economic alternative to constructing another major dam, the Menindee Lakes could be adapted "cheaply" to a major storage facility for the Murray and South Australia by deepening the lakes and providing water for remaining wetlands, which could be incorporated into the project as in Barren Box.

There would be many potential storages along the Murray and Murrumbidgee Rivers (e.g. Tombullen storage 350ha at Darlington Point) and many lakes in the Balranald region that could be "adapted" in this way. (But they're mostly full of water at the moment [Nov 2010]. We've missed the boat for another few years).

Another alternative would be to investigate which dams would be structurally capable of having a few metres added to the height of the existing wall, which would substantially improve storage capacity.

We are just recovering from an eight year drought which has been described as probably the "worst drought in the nation's history" particularly in NSW and Victoria. These cuts to irrigation entitlements will impose a permanent man-made drought.

What happens when the next drought comes along? Nothing is being done or even planned to drought proof Australia for the good of its people.

And what happens if the dams are full and the rivers are running high as they are now? Will we still have these imposts or will we have to buy water back from the Government at a premium price if they will sell it.

With the Greens having the balance of power in the Senate from mid-next year, maybe they won't be allowed to sell.

The fluctuating inflows on our rivers can be expected to continue as they have done for centuries. People soon forget that the dams and structures put on our inland rivers weren't put there for environmental flows. They were put there to provide security of water supply to towns, cities and properties, so that people could decentralise and earn a living running stock and growing food for consumption in Australia and helping feed the rest of the world. Millions of people around the world are starving and irrigation farmers are now being treated as parasites.

Our wetlands are sporadic and wouldn't have received any water during the drought without dams or irrigation structures. The rivers would have run dry naturally several times in this millennium if these structures were not in place. Water security for towns was achieved from the storage held back in our dams.

Australia has always been the driest inhabited continent on the face of the earth, yet no major dam construction has been undertaken for over 40 years. We've just come through a drought which lasted up to ten years in some places and still nothing is planned to drought proof this country.

The immediate need today is not to increase river flows to the detriment of farming, but to add capacity to the existing dams, weirs and storages by collecting and storing water in periods when inflows are above average. This water can then be used for hydro-power (most economical), domestic and industrial use and maintain stream flow for irrigation and food production.

But infrastructure becomes all too expensive it seems, yet we are prepared to spend $43bn on a high speed broadband scheme, which people in most country towns will never see as it will take years to roll out and connection costs will be prohibitive. Inevitably it will be sold to Private Enterprise and costs to the taxpayer will escalate significantly as with every previously owned Government enterprise.

There was a report released in October stating that Australia was now a net importer of food, possibly due to the strong Australian dollar and our profit grabbing, opportunist supermarket duopoly. There's probably not much credibility in this report, as we export so much of our produce. But it is a timely warning as to what could happen in the future.

If you're happy to eat food from overseas, good for you, but be mindful of the standards of hygiene demanded in this country and those that are virtually non-existent outside of Australia.

We've all seen the disastrous impact on health that the slack hygiene standards in food processing can inflict on the general public, particularly from Asian countries.

Australia needs food security and as an exporting nation with efficient farming practices, has a greater responsibility to feed growing global food demands. Its water resources should be allocated accordingly.

To quote Dorothea McKellar, Australia is a land "of droughts and flooding rains". We have just emerged from one of the worst droughts ever experienced and now huge expanses of the Murray Darling Basin are in flood (Oct/Nov/Dec 2010). This is, has been and will always be, the archetypical Australia.

Floods can be just as devastating as droughts. Shouldn't we aim for a plan that will help to protect us all from both these extremes? The Murray Darling Basin Plan in its current form, would create massive social upheaval if, just as the system becomes flushed with water, drought management legislation is instigated.

I believe that most Australians, wherever they live, would like to see the end of unproductive political rhetoric and finger pointing. Let's replace it with some focus on sensible water management. We need a good plan that helps us co-exist productively, profitably and peacefully with our variable and extreme environment.

The draft plan delivered by the Murray Darling Basin Authority will not work because it's focussed on shortages caused by drought. It assumes that the one and only solution is to slash irrigation. There are more economical, intelligent engineering solutions available than this radical approach. We need to start again with a more sensible framework that will optimise and give some balance to economic, social and environmental outcomes. It's not rocket science; just plain common sense, which is obviously not common with today's bureaucrats and politicians.

No Australian will escape the effects of this Guide to a Basin Plan as it presently stands. It must be rejected outright and started again with balanced triple bottom line outcomes. Implementation of any Basin Plan in NSW should not occur prior to implementation in Victoria, by extending NSW Water Sharing Plans to 2019.

Yours sincerely,

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