

30 November 2010

Committee Secretary
Standing Committee on Regional Australia
House of Representatives
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Parliament House
Canberra
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Australia
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Dear Madam / Sir,

I would like to comment on the socio-economic impact of the proposed Murray-Darling Basin Authority's Proposed Basin Plan with particular reference to the irrigation of horticultural crops.

The Murray-Darling Basin (MDB) remains Australia's most important agricultural region, accounting for over 40% of the nation's gross value of agricultural production. The total area of crops and pastures irrigated in the MDB is over 1.5 million hectares. This is about 70% of the total area of irrigated crops and pastures in Australia. The turnover from food and commodities associated with horticultural produce from the MDB is more than \$10 billion annually. Hence the Murray-Darling Basin Authority's Proposed Basin Plan would have drastic effects on agricultural producers and the communities within the MDB.

Being a horticulturalist and resident of Swan Hill, Victoria, I pass open irrigation channels daily. Using data from the Australian Government's Bureau of Meteorology, I have calculated that in northern Victoria alone, where there is around 6,300 kilometres of open irrigation channels (*Goulburn-Murray Water, 2007*), that over 28 gigalitres is lost through evaporation annually (*Australian Government - Bureau of Meteorology, 2010*). If these channels were replaced by enclosed pipelines then the resultant savings in water through reduced evaporation could be used to assist environmental flows rather than the buying back of water from farmers.

Flood irrigation used to be a common method of irrigating crops within the MDB, fortunately most farmers have adopted water saving forms of irrigating their crops,

such as micro-sprays and drippers that apply water directly to the root zone. However, there are still farmers using large self-propelled irrigation units during hot summer days. This is an inefficient method of watering crops. It would be more effective if these irrigation units were used at night as evaporation would be dramatically reduced.

In the Murrumbidgee Irrigation Area (MIA), however flood irrigation is still used for cotton and rice production. As we now know, flood irrigation leads to other problems such as rising salt levels and the evolving of methane from the soil. There has been a lot of research conducted on rice varieties and many of these can now be grown on dry-land, rather than in paddy fields. These varieties are referred to as upland rice and have the advantage of reducing the amount of methane released to the atmosphere during production (Bernier, Atlin, Serraj, Kumar, & Spaner, 2008).

In summary, the MDB is Australia's most important agricultural region, so any change to water allocation at the farm level will have drastic effects on agricultural producers and communities. Rather than the buying back of water from farmers, replacing open channels with enclosed pipelines would result in remarkable savings through reduced evaporation. Improved farming practices, such as irrigating at night and growing upland rice, would further reduce water use within the MDB. Governments, at all levels in Australia, should be working with the agricultural industry and the research sector to implement current technologies in irrigation. This would not only reduce the amount of water used in food production but also contribute to employment growth.

Yours sincerely,

Tony Kennedy

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