

## Submission to Senate Inquiry re the MDBasin

Over the last decade we have experienced one of the worst droughts in the recent history of the Murray Darling Basin. However we know there have been similar episodes last century (the Federation and the WW2 droughts and also shorter periods) and the CSIRO has inferred that there have been even worst periods in the palaeoclimate records.

Despite this history, were not prepared for such an event which would inevitably occur and be disastrous given the increasing demands on the water.

In the Lower Lakes area, of which I am acquainted, the water level was allowed to drop well below sea level and as a consequence numerous other problems arose such the drying out and oxidation of acid soils, sand storms from the lake bed and the dying of the artificial vegetation introduced since the barrages were constructed.

Prior to the building of the barrages the lack of freshwater flows would have been counterbalanced by the inflow of sea water as occurs naturally in all estuaries and which was the case when Capt Sturt made the first observation of Lower Lake salinities during his epic voyage. This fact seems to have been omitted in many recent reports.

Such events will inevitably happen again and may well be worse given climate change predictions for the MDBasin , the predicted rise in sea level and the increased scarcity of fresh water to produce food for increasing populations. Even proponents of a “fresh water solution” for the Lower Lakes admit that:

*“Projected rises in sea level associated with global warming suggest that sea could invade the region in 25-50 years; if this is correct then there are limited prospects for long term management of the Lakes as a freshwater system.”* (Kingsford et al, Nov. 2009), and *“Sea level rise is not seen as an immediate threat due to the geomorphology of the region, but it is acknowledged that it may lead to a transition of the Lower Lakes to an estuarine environment in the longer-term.”* (SA Govt, Dec,2009)

Most of the communities and irrigators around the lower lakes have now adapted to the changed conditions and as such the necessity to keep the Lakes fresh and water levels high has been reduced.

Arguments that salt water will decrease the environmental diversity of the lower lakes are false. As the water levels were declining locally and salinity increasing, I have never seen so many various waterfowl and a local who last year took a flight over Lake Eyre said we had more birds here than there. Now that the Goolwa area is an artificial fresh-water lake, bird life has again been reduced.

We should never again be unprepared for the next drought event and it would be criminal if this Senate Inquiry and/or the MDBA did not produce a definitive action plan for the future. The MDBA and other reports have indicated necessary flows to save the upper Murray but to date have lacked detail for the Lower Lakes.

As the lower lakes are vast consumers of water by evaporation, it is recommended that they be partially disconnected from the Murray by a lock somewhere upstream of Wellington. Sea water can then be used judiciously to maintain water levels in the Lakes which should never again be allowed to fall below sea level. The freshwater saved can then be used elsewhere. The opponents of this scheme may well scream about hyper-salinity in the lakes but as we have seen recently, droughts will eventually be followed by flooding rains capable of resetting the system.

Ian Rowan,

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