SUBMISSION TO THE MURRAY DARLING BASIN PLAN

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The only way we will save BOTH irrigation farming AND key environmental assets in the Murray Darling Basin (MDB) from the next 10-year drought (which will probably be worse than the latest one) is the large scale inter-catchment transfer of water into the basin.

This water could come from high rainfall coastal plains or the Great Artesian Basin (GAB). This would be very similar to the vision of Dr John Bradfield in the late 1930s, which eventually yielded the Snowy Mountain Hydroelectric Scheme which transfers 1000 GL/year of water inland from the Snowy River catchment into the Murray catchment. The shortfall of river flow reported in the Plan is 3-4000 GL/year, so we need another three or four Snowy Hydro equivalent schemes.

Where is there spare river flow to the ocean? Clearly, the Southern Gulf catchment rivers, the Norman, Flinders and Leichhardt Rivers have 10,000 GL/year available during the monsoon. This water would require a double inter-catchment transfer from the Southern Gulf catchment into the Lake Eyre catchment (Thomson River catchment) and a further inter-catchment transfer by a 300km canal from the Thomson into the Paroo River and thence via the Paroo overflow into the Darling River.

If this water were impounded at 200 metres above sea level at Richmond, this would be sufficient hydrostatic head to take the water all the way to the Murray mouth by gravity. Hopefully, by careful surveying a downhill route could be found all the way for a combined existing river/man-made canal route.

The northern rivers of NSW, the Manning, McLeay, Clarence and Hastings, also have 10,000 GL/year water going out to sea mainly during east coast lows. The challenge here is to get this water transferred into the Namoi and/or Gwydir rivers of the MDB, energy-free. I would suggest impounding water half way up the Great Dividing Range on the coastal side. We could then use wind power intermittently to pump the water to the top of the range and recover the pumping energy on the way down the Namoi/Gwydir Rivers as base load hydro-electricity.

The third source of extra water for the MDB must be the Great Artesian Basin (GAB) which lies under the northern half of the MDB. There is a reportd 65 million GL of water in storage in the GAB, enough to last the shortfall for 15,000+ years. We could, unsustainably, withdraw 3-4000 GL/year and possibly hardly notice the difference. The world is, after all, unsustainably using up all the world fossil fuel resources, which will all be gone in less than one hundred years. Some of this GAB water has low saline concentrations, but modern reverse osmosis technology could be used to turn it into river water.

So, we have three major water sources that could be exploited to drought-proof the MDB. These could be costed by a feasibility study so that we can compare the cost of these alternative water sources with the cost of lost agricultural production, combined with the cost of water buy-backs, under the Plan. We might get a surprise at the results. It might be better for Australia as a whole to put extra water into the Basin and spend the required money to permanently drought-proof the MDB as opposed to the required water buy-backs from the farmers under the Plan.

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