

# LEAMAN GEOPHYSICS

ABN: 34 479 871 658

Registered office: 3 MALUKA STREET, BELLERIVE, TAS. 7018 All correspondence to: GPO Box 320, HOBART, TAS. 7001

 Telephone:
 (03)
 6244
 1233

 Fax:
 (03)
 6244
 6674

December 2, 2010

### Parliament of Australia, House of Representatives INQUIRY INTO THE IMPACT OF THE MURRAY-DARLING BASIN PLAN IN REGIONAL AUSTRALIA

The shrill, emotional, understandable but, irrational (see below), reaction to the plan is almost as appalling as the fact of having this inquiry since we seem about to reinvent the folly of the past which created the current problems –whether social, economic, or political. The bottom line: politicians and policy ideologues should step aside (just bug-off) and allow reality to apply. Forget the lobby groups and pressures. We must do this if we want any long term future for the Basin and I am not at all sure that the Plan goes far enough (below).

In order to recommend or review anything we need to consider how we got where we are, whether the fears expressed are real and perhaps compensable, and just what we should expect from the Basin.

The scream to assess social and economic factors and to minimise environmental considerations reflects general ignorance, bad past policy and much short-sighted stupidity.

Let us review some past history and natural reality. All this has been long forgotten.

Once upon a time (pre 19<sup>th</sup> century development and, indeed, prior to 1788) the giant Murray-Darling Catchment (MDC) was largely, if often lightly, forested and subject to extreme climatic vicissitudes, including droughts.

The MDC is comprised of many sub-catchments. The suite of catchments works to make the whole but each is variable in capacity, outflow, wetlands, vegetation cover, groundwater storage – and agricultural potential in our hands.

To newcomers from Europe the land looked good, enticing, with enormous potential. The rivers ran, even if rain was patchy. And, it could be "improved": simply spread out the water. Water is always key.

Start with the river flats (forget or not know that these are flood plains and safety valves in those occasional situations when it rains a lot).

Disaster and distress are now not far off. It has all happened. Many times.

But why not compound the errors?

Build up a farming population, then the towns to support them. Encourage all this as national policy in various guises. Urge it in fact. Generations of political thinking has been devoted to this topic. Most Australians have believed, and still believe, this nonsense of national development. But, at what expense? Expense to individuals, the nation or the country itself? Those citizens making the ultimate act of faith

actually moving to the MDC – soon become locked in. The problem? Once you have become an investor (labour, commitment or money) how can you leave without loss if something goes wrong?

Few have understood the land or its climate/hydrology. This remains true today. Once occupancy had been encouraged and production changed (up from zero and accorded a monetary value) there is lobby and political pressure (called votes if nothing else) and economic liabilities (described as production, assets or debts). Now we have real problems and involved outsiders (such as bankers) and those on the land lose any ease of escape. Having got them into the outback why not help them stay? This is the political urge. Is it wise or practical? It is the basis of today's cry.

Build dams, encourage irrigation (more money, commitment, more ties, and, of course, more "valuable" production). All this was done without a proper review of each sub catchment (and thus of MDC). We then allocated the water creatively – an over allocation. Many allocations are based on "good" times not long term conservative reality in any event.

Worse, we have allowed groundwater extraction as surface and obvious water was dispersed or disappeared. Reduced rainfall in the catchments has not helped. Run down of the water system is then inevitable due to both processes. We have done this because of our delusion that ground and surface waters are distinct and separate; a delusion carved into our law as well. The reality: draw on one and affect the other. Since most of the water in a catchment is underground (typically more than 90%) and drives stream flow most of the time any damage to storage can have severe consequences (such as increased aridity, extension of no/low flow periods).

We have learnt nothing over the years. Forest policies have been enacted which would "restore" the landscape to earlier, drier, conditions (called reforestation) but forgotten the price (use of water resources and reduced availability – see Senate Inquiry conclusions 2004). Then we have allowed separation of land and water rights and permitted sale and trading of water but not counted forestry usage. All this leads to loss of options and ability to manage. Truly stupid. Pure ideology, and against nature and people's futures. The present outcry is to be expected. These people know they are going to lose something; many may have already left the basin having become losers to false promises or assurances which could never be met..

Not only that: we dismantled any sense of sustainability, conservation or management. A good example of this was disbanding of the NSW WCIC (Water Conservation and Irrigation Commission) which had attempted to balance use and conservation. Also, an MDC divided by various authorities/States has not helped, although Tasmania demonstrates the problems can arise in a single jurisdiction. Too many decisions have been made by policy makers and idealists who have had no idea what they were doing and these blunders have enslaved most of those now crying out in response to the present plan.

*The MDC hydrology, is, was, sustainable in its native state.* <u>All</u> *its water was allocated to the environment.* The rivers ran, the forests, grasslands, and wetlands were all provided for in drought-proofed form.

We have changed this by making extra claims on the water and by placing some of that water where it does not belong. By putting some of the resource at our personal disposal and profit we have also generated some negatives (incl. debt, dependency and ecologic damage).

We can now consider our choices in light of this history.

#### Implications for agriculture and food production and the environment.

On the basis that all available water once operated the environment any diversion from human use **back** to the environment is a step toward system longevity and recovery. Catchments need flood flows, storage refills etc. Ideas such as "water running to the sea is waste", or "what I do on my property/State has no effect on others" need to die, soon.

At the same time profitable agriculture must be reduced by such a shift. Note that none existed here for a very long time – it is our creation!

#### Social and economic aspects of proposed changes

Reduction of water availability does convert to fewer people (industry and support). Jobs should be seen in the longest terms or as job-years. If we kill the catchment with abuse then jobs and job-years also diminish with time and stays negligible. We are dependent on system survival – and it must come first.

The question becomes what is the level of water use and production which sustains <u>some</u> jobs and towns in perpetuity? I have yet to see this calculation. This leads to

## Impact of changes on sustainable production and viability of the basin.

An environmental return of 4000 GL has been suggested. Is this volume to come from reduced allocations (including changes in reforestations and forestry locations = planning) or reduced waste/evaporation? Is 4000 enough to make a healthy hydrology? I suspect not based on my experience of dry catchments. I do not have the data in order to offer a better guess. But, if this basin and its sub catchments is to have a future – along with our use of it – then we need to know how much water is needed to sustain it (and us) – and then to figure out how much water we can **safely** divert, and finally consider what is the best use of that water. We are not even close to these goals at the present time. These are the calculations the Authority should be tasked with – not this rubbish about social protection "issues".

Why, we might even have to put a price or value on some intangibles like red gums, flushing to the sea, or Adelaide.

What we must not do is make things worse by giving in to people who are hurting now and who will be hurt more in future. I have spent much of the last decade trying to explain to already distressed people how lack of planning and nature combine to impoverish them if they accept delusions and promises with rosetinted glasses. These are stressful and difficult conversations and it is why I say that bureaucrats, advisers and politicians should bug-off or be called on to explain actions and policies to the very real innocent and ignorant people involved. Perhaps we need to discuss compensation rather than water buy-backs when we know what it has cost people to act on silly advice or policy.

On top of all this we have the reality of climate change and the spectre of further change. This form of change demands flexibility from all: managers, farmers, others, and an expectation of altered production and profitability – essentially downwards. Some of this has already been experienced.

Do we now live with what we have done, for as long as it can support us and accept the final pain later? (total loss) for we are now mining our water resource. Or do we seek a partial restoration of the Basin and then live with that condition? Or, do we go for a long term and complete solution?

The discussion with respect to the Murray-Darling Catchment/Basin (MDC/B) should be seen as a large manifestation of a general problem. This is something not understood, for example, in my own state: Tasmania. Tasmania is years behind in terms of basic stupidity of the type which has long afflicted the MDB but national policies like NWI (National Water Initiative) and sale of resources have now crossed Bass Strait, as well as silly, greedy ideas about irrigation.

I have researched many Tasmanian catchments and all are in trouble – due to bad management, non inclusion of key factors in management balances (e.g., groundwater/forestry use), over allocation and climate change. Yet we now have the inanity of a Tas, government urging massive irrigation projects, aiming to be "the food bowl of Australia", seeking investors and users and attempting to entice those who may lose MDB allocations to come to "wet" Tasmania. Note that much of this stupidity has been federal policy backed with Canberra money and it will destroy both people and catchments. Please stop, now.

All one needs is a little truth and a lot of delusion flowing from a silly Premier and worse advisers. The truth: Tasmania does receive and pass to the sea about 12% of Australia's fresh water and has less than 1% of its land mass. My advice is simple: get a copy of a map showing long term average rainfall – and you will soon see that all this water is in the wrong place and that those parts of Tasmania which can actually grow something are as dry as the back of Bourke, parts are drier. If someone buys into such areas the problems of thin soils and salt soon emerge. Be warned. If you buy an allocation ask where the water is coming from: it may be from a system unable to supply or from someone else who also needs it but who cannot afford to pay. You can become a thief encouraged by advisers who know little, think less and have a secure town water supply. Moving water from another catchment always comes at a price at each end as well as for the pipes. Time to start living within our water means – and our environment determines what this is.

My recommendation/suggestion.

Restore as much flow as possible to the catchment. Live with the consequences (reduced production and population) knowing that it will be a significant change from the present conditions.

How much water? I cannot tell without a review of data and base flow ranges (groundwater is important) but 4000 GL may not be enough for long term security. It may be possible to ease allocation changes by

- planning reforestation and limiting waste; this means, or may mean, removal of trees/plantations from upper/wet parts and accepting slower growth rates down catchment, (just removing trees might be enough but do we want a treeless landscape?

- full review of waste, channels, canals, pipes,

-admission that some dams and weirs may need removal/adjustment.

Full interstate agreement is essential.

Effects upstream do influence results and may alter usage. This reality has to be accepted by all.

Each sub catchment must be put in neutral balance or surplus. This means that changes in allocations and usage will vary between regions. No blanket value will or can apply. Some catchments may be fine needing little change while others may demand big changes. We need calculations pf the type I published in 2008 for E and NE Tasmania. Management must also be flexible in order to cope with both annual and long cycle climate changes and trends.

#### SOME REFERENCES

\*\*\*\*LEAMAN, D. E., 2008. Comparative Assessment of Catchments in Eastern Tasmania – issues for Management. WATER DOWN UNDER 2008. Proceedings 4<sup>th</sup> International Conference on Water Resources and Environment Research, Adelaide, April. Pages 542-554. Engineers Australia.

A summation of research and recommended management for easr Tasmanian catchments.

- LEAMAN, D.E., 2003. Submissions to Australian Senate: Inquiry into rural water usage and 2020 plantation vision. *Sustainable water resource usage*. November. Published as Senate Committee Reports of Rural and Regional Affairs and Transport References Committee, August and September, 2004. (See also Leaman, 2007)
- LEAMAN, D.E., 2003-2004. The Assessment of Rural Water Supplies. An introductory guide. Eds 1, 2. (See also Leaman, 2008)
- LEAMAN, D.E., 2004. Research Report. *Hydrological assessment of some dolerite catchments in eastern Tasmania.* Leaman Geophysics, Hobart. (See also Leaman, 2008).
- \*\*\*LEAMAN, D.E., 2004. Management of the Little Swanport River: with particular reference to a dam at Stonehenge, (plus supplement March 31, 2005), Public submission to DPIWE and proof of evidence RMPAT appeals, Leaman Geophysics, Nov. 12. (also submission, L. Swanport Draft Management Plan)
- LEAMAN, D.E., 2004. Hydrological assessment. George and Ransom Rivers, North east Tasmania. Research report, Leaman Geophysics. (See also Leaman, 2008)
- LEAMAN, D.E., 2004. *Hydrological consequences of forest operations in Upper Duck River Catchment*. Report for P. Clark, January.

(See also Leaman, 2008)

- LEAMAN, D.E., 2004. Hydrological assessment. North Esk River, Northern Tasmania. Research report, Leaman Geophysics. (See also Leaman, 2008)
- \*\*LEAMAN, D.E., 2004. *Risk of water loss: Dellicknora Creek, East Gippsland, Victoria.* Opinion and proof of evidence for Victorian Civil and Administrative Tribunal, Melbourne. May.

\*\*\*\*LEAMAN, D.E., 2007. *WATER –facts, issues, problems and solutions.* 196 pp. Leaman Geophysics, Edition 3. Book: with outlines of legal, management and, especially, forestry issues.

- LEAMAN, D.E., 2007. Some *Hydrological Aastonishments, and the Penola Pulp Mill Proposal, South Australia.* Symposium presentation, Penola. February.
- \*\*\*LEAMAN, D.E., 2007. *Water issues, management and the Penola Pulp Mill proposal, South Australia.* Submission to Parliament of South Australia Inquiry. June.
- Commissioned reports to comment on proposed Tasmanian water use and irrigation initiatives. See various web sites: documents relevant to MDB history, policies, and future planning.

\*\*\*\*LEAMAN, D.E., 2009. Lessons from the Coal River Catchment. Leaman Geophysics, July.

\*\*LEAMAN, D.E., 2009. Irrigation proposals, Midlands Tasmania. Two parts: Schemes dependent on South Esk Catchment, or other catchments. Leaman Geophysics, July.

\*\*LEAMAN, D.E., 2009. Hydrological comments, North East Tasmania, Dam Proposals. Leaman Geophysics, July.

DR D.E. Leaman GPO Box 320, Hobart, Tas 7001 ph: 03 6244 1233