



15 November 2012

Questions on Notice to the Senate Environment and Communication Legislation Committee on:

- 1. Inquiry into Water Amendment (Long Term Average Sustainable Diversion Limit Adjustment) Bill 2012 [provisions] (SDL BILL)**
and
- 2. Water Amendment (Water for the Environment Special Account) Bill [provisions]. (Special Account Bill)**

a. Do you believe it is likely that improvements in scientific knowledge and engineering works will result in less water being required to fulfil the environmental requirements of the plan?

Improvements in scientific knowledge may vary across the many different ways that rainfall, runoff use and losses interact with the environment. Since the announcement of the Cap on Diversions in 1995, it has become clear that previous proposals to return 500GL and 1500 GL of water to the MDB were inadequate. The science around climate change is becoming more certain with the impacts of more extreme events including drought and prolonged drought being plausible. Under these conditions, more water would be required to meet the environmental requirements of the plan.

There is also significant uncertainty with respect to impact of increased groundwater take on surface water. The connectivity between groundwater and surface water in basin is poorly understood and modelled. Until modelling is done we do not know how much water benefits the system as a whole, such that both the groundwater environment *and* the surface water environments are adequately watered. The Basin Plan is required to be for the health of the whole system, not just specific sites or surface water. There needs to be proper consideration of the connectivity and through flow, not just specific sites.

b. In your opinion what is the best way to measure the environmental health of the Murray Darling Basin System?

A comprehensive and transparent monitoring program would cover the key basin wide environmental assets from the Murray Mouth, Coorong , lower lakes, wetlands to the upper reaches of the basin.

- Data monitoring points would be representative rather than selective.
- Data monitoring systems would be sufficiently comprehensive to describe the changes, health of the environment, and resilience towards the next drought.
- The measurement must be able to tell the story. For example, where hundreds of thousands of mature red gums have been lost, is new recruitment healthy enough to survive in the new watering regimes and EWP's proposed by the plan? Are keystone species such as the *Ruppia tuberosa* recovering to towards resilience in advance of the next dry period? If not the plan would be failing. Are key wetlands including Ramsar sites wet or wet enough ?

The health of the Murray Mouth, Coorong and Lower Lakes is a good indicator for the whole basin. If the mouth is open and flushing and the Coorong is healthy then the river system is functioning and whole system, not just relying on certain parts at the expense of others.

**c. Briefly, could you outline the positives and negatives of reducing system constraints to improve the movement of water within the Murray Darling Basin?
Positives of removing wetland constraints include:**

- Identification of the constraint and whether it is significant or not will support informed decision making
- Non physical constraints do not need to be physically removed, they may simply require management reforms and planning
- Infrastructure constraints such as bridges and delivery capacity should be addressed in response to the risk of increased extreme events that are plausible with climate change
- Flooding of flood plains can bring positive benefits as well as problems for farmers and irrigators. The costs, benefits and risks need to be assessed

d. In your opinion, what is the best way from this point in time, to return environmental water to the Murray Darling Basin and why?

STEP 1 The science can guide what is required to return the MDB to health. The modelling of higher values of 4000 GL+ is still required to determine the flows that are required.

STEP 2 Working towards achieving a healthy basin is the next step.

This Plan and amendment bills to the Water Act are seeking to achieve step 2, without acknowledging step 1 is not complete.

Currently the approaches of recovering the water are centred around voluntary buybacks and infrastructure improvements to improve the efficiency of delivering water to irrigators or the environment.

It is essential that the SDL and Special Account bills do not include new opportunities or loopholes for spending large amounts of money that may not result in additional water. The 450GL identified in the Special Account bill must be locked in rather than being simply an 'up to' aspiration.

The 5% adjustment mechanism must not become a new battleground for eroding the SDL.

Given that voluntary buybacks can be achieved at dramatically lower cost compared with infrastructure improvements, we believe that voluntary buybacks should continue as a key strategy. A more creative approach is required such as targeted programs for % recovery of water allocations where minimal impact on farm/business productivity can be demonstrated to the Authority by those potential sellers.

We do not accept the so called "Swiss cheese effect" is devastating the MDB. The committee should consider the work of Quentin Grafton, Chris Miller and other socio-economic studies that locate the problems facing the MDB in the context of broader changes occurring in the rural sector. We suggest that buy backs have afforded irrigators choice, providing options to diversify their business or reinvest the money elsewhere in the community.