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Agricultural Competitiveness Taskforce
Department of the Prime Minister and Cabinet
PO box 6500, Canberra ACT 2600

Dear Minister,

In general, there is a lot to like about the Green Paper, both in the water resources section and in other sections. It is forward looking, positive and supportive of the important and complex industry that is Australian Agriculture. I am very supportive of how it suggests that Australia should be looking at smart, technologically advanced, resilient agriculture that delivers high quality products. However, exactly with this statement in mind, I am surprised that the Green paper also makes some suggestions, which I, from my professional point of view, cannot support and would like to see reconsidered in the white paper.

The purpose of the Green/White paper is identifying the best areas of public investment. In the following I will concentrate on the question of how we best can deliver some level of water security for Agriculture.

The Green paper makes proposes several policy ideas in this area, and the one I am concerned about is the suggestion that new dams should be build (Policy Idea 18 a) as part of improving water infrastructure.

Improving water infrastructure is a wide topic and most suggestions in the Green paper are worthwhile. **It is just the construction of new dams that does not fit in the overall picture and future vision.** I will explain this in more detail.

Dams are a commitment to a very large investment with long lead times, we are probably looking at a minimum of 5 – 10 years to plan and operate.

There are three main arguments why further investment in dams is not a wise decision.

1. **Australian climate variability** is often used as an argument to increase water storage as this would offer security. I argue that this is in fact a false sense of security as the climate variability cannot be managed, and might even increase, and this makes dam storage either inefficient or not sufficient. This is because it is impossible to control the inflows and losses through evaporation or leakage. As a result, and this was demonstrated in Petheram et al. 2008 for Northern Australia, dams need to be very large (and therefore mostly empty) to deal with the variability in flows. If droughts will be increasing in the future, as has been forecasts, it is even more likely that dams will be empty. This question the value of the investment in new dams and also highlights that dams only deliver a false sense of water security, not real water security.
2. **Dams are an attempt to dominate nature.** In contrast, all the landholders and agriculture producers that I speak with always impress me with their ability to work with nature, rather than trying to dominate nature. This is particularly true in Australia, where generations of producers have developed a unique set of skills to deal with the ongoing variability. We need to adapt to the variability and using

smart solutions to deal with this. The Green Paper also highlights this fact (p72): “Through successive generations of ownership, many family farms have acquired a deep understanding of local ecosystems and weather patterns, with their adaptive farming practices supporting the long-term sustainability of their land resources”.

3. **Technological advancement in water use efficiency.** Dams take a long time to plan, build and get to operation. If we look at the major technological advance in the last 5 – 10 years in crop genetics, mobile computing, monitoring, robotics and satellite information, then in 10 years, farming might be unrecognisable. It is very well possible that dams will be outdated technology at this point. Will we be harvesting water from the atmosphere? If we just take the example of genetics and how this has been improving productivity. The submission by the cotton industry highlights an improvement of 40%, and other industries would probably achieve similar improvements. With this in mind, the question is really whether investment in new technology and increasing water use efficiency, not just in the MDB, but more generally, different crops, different animals, different management, isn't this a better choice?

The highlighted example in the Green paper on the MacAlister Irrigation district is a good example of increasing irrigation water use efficiency, for an existing dam, rather than increasing storage capacity. We also know that in normal management crops are hardly ever reaching their potential: the water use efficiency line. In most cases there are still many improvements possible in the management of nutrient inputs, pests and diseases, drought preparedness, monitoring and measuring of water on farm, as well as controlling water on farm in a more detailed way to bring crop performance closer to the water use efficiency line. This might be limited by producer skills, but the Green paper already highlights that Agriculture Education is an important issue. There are similarly possibilities in improving forecasting of rainfall and heat stress, timing of irrigation, and planting decisions.

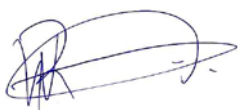
In the end, Australian agriculture wants to deliver high quality products rather than bulk: fine wool, sustainable beef, top hard wheat, high quality cotton and niche products like sandal wood and alpacas. We want to be marketing clean, green and safe products to the Asian markets, we have the advantage.

We know that **knowledge and technology is available and becoming cheaper in Australia. The question really is can everybody access it, and can everybody work with it?** An example of this is: the progress in seasonal and long term forecasting at the Bureau of Meteorology as part of the National Water Initiative investment. The knowledge is available and readily accessible from the Bureau website, but the knowledge is not yet used by everybody in Agriculture, due to limitation in skills and understanding.

Further investment in on farm water use efficiency on farm and the skills to work with the technology is a better option than investment in large dam infrastructure. This will improve resilience and ability to work with the variable climate in Agriculture for individual producers and deliver much more water security than dams.

I hope these comments will help in developing the White paper policies.

Sincerely,



Willem Vervoort