

Supplement to Joint Statement on the *Water Act 2007* (Cth)

Submission to the Senate Inquiry into the provisions of the *Water Act 2007*

Answers to Questions on Notice from Senator Xenophon, 18 May 2011

These answers are provided by Dr Anita Foerster and Associate Professor Alex Gardner.

Senator Xenophon's first question may be summarised as follows. Is the early adoption of water use efficiency measures by private investment a relevant factor to consider in determining the Sustainable Diversion Limits ("SDLs") for water resource plan areas? His suggestion is that some South Australian irrigators have invested in the early adoption of measures that have improved their water use efficiency. He inquired how this should be taken into account in "determining an SDL for a particular area".

Senator Xenophon also suggested that those irrigators that had invested privately in water use efficiency are now at a disadvantage in attempting to access Commonwealth Government money under the Water for the Future Fund through either the "water entitlement buyback scheme – Restoring the Balance" (presumably because they would price their water too highly in a tender to the Commonwealth) or the "infrastructure investment – Sustainable Rural Water Use and Infrastructure program (presumably because they have less scope to improve water use efficiency).

We will address the first question because it pertains to the Committee's terms of reference for an inquiry into the provisions of the *Water Act 2007* (Cth). In doing so, we presume hypothetically that it is possible that some irrigators have been early adopters of water use efficiency measures and that there could be a high proportion of irrigators in some regions that have done so. We offer no opinion on whether this has happened in South Australia or other parts of the Murray-Darling Basin.

The second question pertains to a funding program administered under Commonwealth appropriations and executive government authority but not administered under the terms of the *Water Act*. The Australian Government has undertaken to use these programs to acquire water access entitlements to reduce the level of entitlements from the current diversion limits to the levels adopted by the SDLs. Thus, the interaction of water use efficiency factors with that program may be very significant. However, we have not endeavoured to answer how that program could be administered to take account of water use efficiency investments of early adopters. That is a bigger task beyond the scope of submissions regarding the interpretation of the Act.

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1. Senator Xenophon's first question raises two issues:
 - a. is water use efficiency a factor that may be considered by under the *Water Act 2007* (Cth) in determining SDLs?
 - b. if so, how may it be considered and is there a duty to consider it in any particular way?
2. Water use efficiency is a factor that may be considered relevant to the objects of the Act, as a factor relevant to economic outcomes of water management and efficient and cost effective water management: s.3(c), (d)(iii) and (g). Water use efficiency is relevant to the purposes of the Basin Plan; it is relevant to optimising economic outcomes (s.20(d)), to applying the principles of ecologically sustainable development (ss.4(2) & 21(4)(a), to having regard to the consumptive and other economic uses of Basin water resources (s.21(4)(c)(ii)). Water use efficiency is, arguably, also relevant to the Plan content through the above provisions and through the requirements that the Basin Plan identify risks to the condition or continued availability of Basin water resources (s.22(1) item 3) and the strategies to manage those risks (s.22(1) item 5).
3. If water use efficiency is a relevant factor to be considered under the Act, how may it be considered? Should it be considered relevant to determining SDLs, even a mandatory relevant consideration or a mandatory rule in that task? The answers to these questions lie primarily in the interpretation of the Act, but a brief comparison with American water law doctrine is helpful. In the water law of the western United States of America, water use efficiency is regarded as an element of the 'beneficial use' doctrine. This means that water rights holders who do not use water efficiently may lose the wasted part of their entitlements.¹ In this context, however, water use efficiency is seen as relevant to competing consumptive claims on water resources. We have not been able to research the question whether, in US law, water use efficiency may be relevant to a contest between consumptive use and environmental conservation. However, in the context of the MDB, it may be possible to see reductions in consumptive use water diversions in one water resource plan area as contributing to the availability of water for consumptive use or environmental conservation in another area downstream. This is the scenario that Senator Xenophon's question raises for South Australia.
4. The MDB Authority addresses this question in the Guide to the Basin Plan, vol. 1 Overview, chapter 8, esp. at 8.6 – 8.8. The Authority defined its approach to optimising environmental, social and economic outcomes, adopting the principle that SDLs must deliver appropriate environmental water requirements in each catchment (plan area). The Authority recognised that, because of differing levels of overallocation in different plan areas, reductions to consumptive use diversions would impact more severely on some communities than others. In seeking to maximise net economic returns to communities and key industries in this context, the Authority stated that "there is no formula for determining the optimal result and [that it] will do this by applying its judgment in seeking to maximise the benefit to the environment while minimising the economic and social impacts": p.107. Accordingly, the Authority was undertaking comprehensive social and economic studies to inform its deliberations but it did not explain how those studies may be applied. Further, the Authority adopted a principle "whereby each upstream

¹ A Gardner & K Bowmer, "Environmental water allocations and their governance" in K Hussey & S Dovers, *Managing Water for Australia*, CSIRO Publishing, 2007, p.50

catchment should first meet its own environmental requirements and then all connected tributaries should provide for the respective downstream systems ... *through increasing reductions in tributaries in proportion to current diversion limits ...*": at p.108. Thus, in each of these two situations, the Authority has chosen not to apply a water use efficiency criterion to ascertain an appropriate level of reduction in diversions in one plan area compared to another.

5. We suggest that this approach is consistent with the Act: water use efficiency may be a relevant consideration but it is not a mandatory rule to apply in determining SDLs. This is because the Act contemplates another mechanism for recognising water use efficiency; namely, the market. Water use efficiency contributes to the productive value of water use; greater efficiency may align with the higher value water use. One of the purposes of the Basin Plan is to provide for "water to reach its most productive use through the development of an efficient water trading regime across the Murray-Darling Basin": s.20(e). Thus, although it may be feasible for the Authority to calculate comparative levels of water use efficiency across different plans areas,² we do not believe that the Act should be interpreted to require that water use efficiency be applied as a criterion when ascertaining what level of diversion reductions should be made. We can see no explicit statutory duty to this effect.
6. The Guide also says that State water resource plans will determine the distribution of water available for use under the SDLs among various water entitlement holders in that area. The impact on particular water entitlement holders that will result from the establishment of SDLs is a matter for the new State water resource plans: p104.
7. In summary, while water use efficiency may potentially be relevant to the initial consideration by the Authority of the social and economic impacts of proposed SDLs, and how to ensure economic and social outcomes are also optimised in a catchment, the treatment of certain groups of irrigators is more a matter for the subsequent planning process at the State level, through which the distribution of water available for use under the SDLs among various entitlement holders can theoretically be revisited. Finally, ensuring equity in the distribution of diversion reductions will be a matter for the design and implementation of current and future adjustment packages, including of the Commonwealth's Water for the Future Fund.

² The Authority says that there is reasonably good aggregate information about what is produced, where it is produced, profitability and related water use, and that estimates of dollar value costs of change at a Basin scale for the long term can be reasonably estimated: vol 1, 8.12, p.119.