



Droplets explore ideas and propositions, which if developed further, might improve water use. They develop ideas and search for fundamental concepts and building blocks that one might consider if not constrained by prior decisions.

Sustainable Diversion Limits: A plan for the Murray-Darling Basin

*"I love a sunburnt country,
A land of sweeping plains,
Of ragged mountain ranges,
Of droughts and flooding rains "*

Dorothea Mackellar

The Murray Darling Basin Authority is about to release a Draft Plan for the management of the Murray Darling Basin’s water resources. As with all plans, there will be devil in the detail – especially in the way the Authority chooses to specify Sustainable Diversion Limits (SDLs).

The final version of the Basin Plan is due to be gazetted in 2012 and, once gazetted, the SDLs specified in it will be very difficult to change. Yes, there is a transition period between 2012 and 2019 to allow closure of the gap between existing arrangements and the SDLs set by the Authority but, once 2019 arrives, the SDLs set in 2012 become binding.

When it comes to setting SDLs, section 23 (2) of the Water Act gives the Authority three choices. The Authority can

- a) set a number – as is proposed in the Guide to the Basin Plan.
- b) use a formula; or
- c) specify sustainable diversion limits “in any other way that the Authority determines to be appropriate.”

When option a) or b) is used, the Act requires any reduction in an SDL to be implemented via a tortuous Basin-wide review process involving full consultation with MDB states, approval by the Commonwealth Minister and scrutiny by Parliament. If the resultant review results in a reduction in an SDL then the Act requires that a compensating cheque be sent to each entitlement holder adversely affected by the reduction. Option (c) allows the Murray Darling Basin Authority to be as innovative as it wants to be.

Of these three choices, which is the best option?

Options

Paraphrasing Dorothea Mackellar, a good Basin Plan needs to plan for droughts and flooding rains. And given the likelihood of changes in technology and climate, a fixed number based on averages does not seem like a good idea.

Conceptually, a formula sounds better than a number as it can allow for change. But, all the variables in the formula and all the coefficients in the formula would need to be right from day one. Difficult!

Given these limitations, we believe that option (c) is worthy of serious consideration. The Authority could specify SDLs so that continuous improvement in the management of the Basin’s resources becomes possible.

An adaptive SDL

If option (c) is chosen, SDLs could be published in the Basin Plan in 2012 but specified as the starting point in a continuous search for better ways to manage and use the Basin’s water resources.

To open up this opportunity and set up an adaptive SDL framework, the Basin Plan would need to establish an SDL register and allow this register to be changed as innovation occurs and knowledge improves. Local community representatives could request an amendment of their SDL to account for any initiative they have taken. Initiatives they might consider include investment in so-called “environmental works and measures” and policy changes that enable the more efficient delivery of environmental outcomes.

In practice, the structure of an adaptive SDL register for a regional water resource would look like this.

| | | | | |
|--------------------------|--|--|---|--|
| | Opportunities to adjust an SDL as adaptive improvements are made | | | |
| SDL_t = | SDL₂₀₁₂ | + Effects of changes to the portfolio of environmental entitlements held after 2019 | + Effects of investments in environmental works and measures made after 2012 | + Effects of policy changes that make environmental water management more effective made after 2012 |



Governance

If option (c) is adopted and the Basin Plan used to establish an SDL register, there would be a need to differentiate between register changes that

- i) are clearly in the interests of all; and
- ii) might have adverse impacts on some users.

The process for amendment of the register when a change is “clearly in the interests of all” could be quite simple. The Authority could require such applications to be co-signed by the chairs of the local catchment board, the local water supplier and the regional environmental water manager. If the application is judged by the Authority to be consistent with principles set out in the Plan and not to have unacceptable impacts or implications for other parties, they could agree to amend the register. If this degree of consensus is absent, or if the Authority is concerned that the proposal may have unacceptable impacts on others, then the proposed change would have to go through a full Basin Plan amendment process required by the Act.

Examples of changes worthy of consideration

If an adaptive SDL register, as proposed in this droplet is established, communities would have an incentive to negotiate with one another and continue to search for ways to improve the Basin Plan after 2012.

A South Australian environmental water manager may, for example, be interested in exchanging some high security South Australian environmental water entitlements for some low security water entitlements held by Victorian irrigators. If all involved, think that this reconfiguration of their respective entitlement portfolios makes sense, then why stop them from benefiting?

Similarly, a local farmer may identify an opportunity to build a control structure enabling water levels to be raised and lowered in a manner that produces better environmental outcomes with less water. Once this structure had been shown to work, local community representatives could apply for “their” SDL to be increased. The relocation of a supply channel could be used to achieve a similar increase in an SDL.

Another example is the possibility that an environmental water manager might be able to negotiate an options agreement with a local irrigation company. Options agreements that make more water available to the environment in very wet years and more water available to irrigators in very dry years are worth careful consideration. If such an options agreement was put in place then, instead of parting with money, those involved could apply to have “their” SDL increased. Potentially, a win-win outcome for all involved.

Under this proposal, local people could be encouraged to search for policy changes that would lead to better environmental outcomes. This might, for example, encourage them to consider changing carry forward arrangements so that it is easier to supply water for the small flood-like events needed to sustain some species and some wetlands.

Another opportunity worthy of consideration is a change to the way “planned” or “rules-based” water is managed. In an average year, over 5,000 GL of MDB water in NSW lies outside the entitlement system and is used to “run the river.” If more of this water can be turned to environmental benefit then it may be possible to increase an SDL.

Under this register approach, any approved sale or purchase of entitlements for the environment would be recorded in the SDL register.

Where to from here?

When the draft Basin Plan is released, we urge careful consideration of the way that SDLs are specified and how adaptive the Basin Plan should allow management arrangements to be.

If governments want to allow adaptive improvements to the Basin Plan in partnership with communities, then section 23 (2) (c) is the way to go.

If section 23 (2) (a) is chosen, SDLs will be cast in stone in a manner that could stifle improvement, discourage local initiatives and effectively freeze progress.

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References (Access them by clicking on the links embedded in this Droplet.)

[Water Act, 2007 as amended.](#)

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