The recently released Productivity Commission Discussion Draft titled “Rural Water Use and the Environment: The Role of Market Mechanisms” provides a solid basis for further discussion and development. However, it has some serious shortcomings that need to be addressed to provide a proper framework for the full development of rural water markets. These shortcomings are the subject of this submission.

The first issue is the underlying assumption that more water trade will lead to a better economic outcome. This assumption only holds true if there are no externalities (or third party impacts) associated with the trading of water. However, it is well known and also acknowledged both in the document and the economics profession that externalities do exist. For water trading the major externalities are:

- Environmental impacts associated with changes in the hydrological regime of rivers; and
- Social and economic impacts within the regions where water is traded (both positive and negative) – the magnitude of which will vary depending on the volume of water traded.

Economically, greater water trade will deliver an overall social loss if the marginal costs (including environmental and social costs) are greater than the marginal benefits. This could easily occur if water traded out of one region results in significant social and economic costs (due to a critical viability threshold being crossed for example) but only delivers small marginal benefits to the area where water is being bought. While the Productivity Commission’s report takes a stance against exit fees for water trading, in circumstances such as the one described above, exit fees could conceivably deliver the optimal social outcome by preventing undesirable water trades. The issue with exit fees (and conversely entry subsidies) is setting the levels accurately so that the fees (or subsidies) accurately reflect the true external costs (or benefits), of the trade (both social and environmental), thereby delivering the socially optimal outcome by ensuring that all productive trades take place and non-productive trades are prevented.

This then raises a critical issue of setting an appropriate and transparent framework for the water market to take into account externalities. It is unreasonable to expect a private buyer to cover all the external impacts of a water trade, particularly when they do not receive all the benefits that may accrue to other parties. Clearly, in this case of market failure, there is a role for government to provide a framework and mechanism (which could be market based) for dealing with such impacts. While some may argue that the costs of such a framework could be higher than the costs of preventing unwarranted trades – it could also be equally argued that mechanisms which

prevent over-trading (and the resultant overall economic cost) may be less costly than the benefits forgone by having increased trade and the costs of too much trade. Either way – the costs (including environmental and social costs) and the benefits need to be clearly substantiated by strong empirical evidence rather than just rhetoric. Therefore, in order for water trading to deliver optimal outcomes, a transparent, scientifically based and rigorous framework is required, and this framework must consider and incorporate all externalities.

Another issue that is not sufficiently dealt with in this draft report is the practical issue of actually delivering the water to be traded. Merely accounting for water trades between irrigation regions (for example the Goulburn System in Victoria and the Namoi System in NSW) does not address the actual problems of physically delivering water of the same quality and reliability from the region it was originally sourced. Furthermore, the impacts will be felt by the environment and hydrological regime of the respective river systems until the ultimate downstream confluence (in this example the junction of the Murray and Darling Rivers). One possible solution is the use of counter-balancing trades, which effectively result in water being traded within the respective regions of interest. From this it is clear that substantial further work needs to be undertaken to adequately address these problems.

One of the major key points of contention is the assertion that purchasing water will provide a cheaper option of sourcing water for environmental objectives compared to infrastructure projects. This assertion is largely based on a comparison with the potential purchase price of water in the open market. However, such a comparison is invalid for a number of reasons, including:

- Engineering or infrastructure projects are often fully (and conservatively) costed whereas the purchase price of water does not include externalities (as previously discussed). Where a significant volume of water is purchased from one region, substantial social impacts and structural changes may occur. This then may impose considerable costs on the local community and/or Government if assistance is offered. The purchasing of water for environmental purposes needs to be accompanied by a full social and economic impact analysis to ensure that all the costs are included and that cheaper, alternative options are considered; and
- The presence of a large buyer such as Government or an “environmental manager” has the potential to distort market outcomes. Economic analysis based on competitive markets is reliant on the assumption of many smaller buyers and sellers – with none having market

power. The presence of a large buyer (or seller) violates this assumption and requires the analysis be undertaken using a different approach. Assuming all externalities are included in the price of a good (in this case water), a competitive market will generally deliver a better outcome compared to when a buyer or sell has market power. Hence, active participation in the water market by Government or an environmental manager with market power is likely to lead to sub-optimal outcomes.

Dealing with salinity through market mechanisms needs to account for the risk of salinisation. It must deal with both the likelihood and impact of salinity within a given time-frame. In the longer term, newly developed irrigation areas may have a comparative advantage over more established regions simply by virtue of the fact that the water-tables have not had time to reach critical levels for salinity to occur. Such a comparative advantage is simply an artefact – it does not truly represent the optimal locations for irrigation to be taking place. Hence, the time frame for risk considerations needs to be suitably long. Furthermore, the market mechanisms for salinity impacts need to consider all the costs and risks of salinity, including external costs.

Should clarification be required on any of the above matters, please feel free to contact the undersigned.

Regards,

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