## General Comment:

A repeated message in the text is that sometimes the costs of specifying precise property rights and of market exchange of precisely- specified rights will exceed the benefits of market coordination of parties' interests. For example, this may be the case for net entitlements, storage capacity shares and river capacity rights. The key to readers understanding why this is so is clear identification of the cost barriers to precise property rights and market exchange, and of the value of the benefits of exchange. Consider these in turn.

As set out in sections 5.5 and 5.6 of the second edition of my book Economics and the Environment, the costs are the costs of identification of parties, of measurement of what is transferred, of eliciting true valuations, of exclusion of non-payers, and of penalising illegitimate use. To be as clear as possible as to how cost barriers arise, I think that some mention of these issues in connection with the discussions of property rights in 1.3 and of externalities and their classification in 5.1 would be helpful.

In my view, the criteria in Box 5.1 are important because they impact on the costs of various of the above-listed activities. To make the point as explicit as possible, if, say, a court is asked to deal with a dispute over rights, it will need to identify parties, the nature of the transfers involved, and the accuracy of measurement of those transfers. Similarly, in setting up a market instrument like Bushtender, the means and costs of identification, measurement, valuation and penalising illegitmate actions have to be considered.

The magnitude, and probably sometimes the identity, of the cost items are likely to be be important in considering tradeoffs between the criteria in your assessment framework depicted in Table 5.1. As pointed out at the start of 5.2, costs are interdependent with, particularly, feasiblity and effectiveness, so much so, that I suspect that the subsequent tables evaluating specific market mechanisms make much more sense when the author has a specific market institution with specific design features and costs, for example, Bushtender. In other words, assessment should be applied to specific, not generic, market instruments.

The use of the flexibility criterion in chapters 5-7 puts me in mind of my brief discussion, in 24.2 of my second edition, of the dynamic nature of the benefits and costs of property rights and markets, and hence of the efficient amount of market coordination, over the medium to long term, as preferences, relative values, scientific knowledge and technologies change. I think that it is important for the report to inform interested parties that no particular set of rights to water and its various attributes will remain socially optimal in the long term.

Turning to benefit valuation, once property rights are precisely- specified, the identification and valuation of benefits of commercial products such as irrigation water is no problem. This is not the case when the desired product is non-commercial, such as biodiversity preservation in Bushtender or riverine ecosystem maintenance. The draft rather sweeps this valuation problem under the carpet in chapters 5 and 6 by assuming that 'environmental managers' will have clear objectives. However for non-commercial environmental products, benefit valuation is just as important as costs identification and valuation in establishing the efficiency of market mechanisms.

Some particular points:

p.5, par. 3. Might help to briefly note categories of costs.

p.8, first line. Ecological life support values are generally unrecognised and undervalued in the community, but may be crucial for our descendants.

p.17, par.3. What sorts of contracts between utilities and irrigators? Without more information, it is unclear how obligations in contracts compare to defined rights.

p.26 It may help to describe the activities and types of costs involved in defining net entitlements.

p.29 Sales water use problems remind me of the issues of managing common pools.

pp.68-71 On the assumption that 'stranded assets' and exit fees are a live issue for many irrigation communities, I wonder whether the discussion on p.70 could be expanded. The assets are sunk, so the issue surrounds the remaining irrigators paying higher running and essential maintenance fees (to the extent that no part of the infrastructure can be decommissioned) until the assets are fully depreciated or new investments are commercially justified. This seems to be a standard pecuniary externality, with no distortion of signals to decision makers. As such, it appears an appropriate market signal regarding the declining competitiveness of an irrigation area. Of course, if neighbours of the entitlement seller have different views of the future of their area, they are - should be - able to put in competing bids for an outgoing entitlement. (Perhaps social pressures encourage would-be sellers to try to conceal their selling plans, impeding information to neighbours; if such non-transparency in the market is a real problem, there may be justification for ensuring that the local irrigation community is fully informed before any sale takes place.) If informed locals are not prepared to put money up to retain an entitlement (Bendigo Bank funding model?), then the market signal involved in higher charges for remaining irrigators may be an appropriate incentive for them to make adjustments that shift resources out of a currently sub-competitive area.

p.87, par.2 Do distribution rules guarantee that the saved water goes to those who would pay the going market rate?

p.96, par.1 It is frequently difficult to value non-commercial benefits or harms due to possible externalities, thus, allowing for transactions costs, deciding the whether the 'externality' is Pareto-relevant or not can be tricky. Hence the need to pay attention to techniques for valuing external benefits and costs.

p.96 See the comment on p.8 above.

how acceptability is being determined.

p.96 last par. The last sentence is not always true with positive transactions costs - is this the import of the word 'may'? But then I don't see the relevance of the statements.

p.99, par.3. This paragraph starts out as if 'acceptable' means 'optimal' in economic terms, implying marginal comparisons. Then it shifts to 'acceptable' in some political sense. It would help to be clear on whether the author is thinking of marginal or total changes, and

p.100, par.2 No mention of the problem of valuing objectives.

p.101 To be complete, should there be a reference to the comparative performance of non-market mechanisms?

p.156, par.3 Private gains to individuals are often low.

Regards

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