

Sustainability in the Murray Darling Basin

- and Some Reflections on Sustainability

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1. The Murray Darling Basin Issue

- In terms of demographics, agriculture, and economy, MDB matters
- Water is over-allocated
- Water quality is of increasing concern
- Environmental flows have been neglected
- Demand for diversions is growing quite rapidly
- Scope for engineering solutions is limited
- Demand management seems essential
- Change rainfall patterns
- Increase evapotranspiration
- Increase demand for diversions
- Increase pressure on environmental uses

2. What Do We Mean by Sustainability?

- **Seeks to sustain welfare**
 - **Assumes liberal substitutability in consumption**
- **Assumes factor mobility and generous K-D substitutability**
 - **Solow's (1972) theorem: an economy dependent on an exhaustible resource may be sustained indefinitely if ...**
- **Some observers argue that this line of thinking is inconsistent with the main strand of microeconomics – discounting**
- **Policy instruments – getting the prices right**
- **Policy instruments – saving and investment of resource rents, to compensate for net resource extraction**
 - **... despite some technical difficulties in getting it right**

i. Weak and Strong Sustainability (continued)

- **Strong Sustainability**

- Motivated by claims of
 - uniqueness
 - non-substitutability in consumption → non-fungibility in value
 - non-substitutability in production

- Comes in many degrees of strength

- **A fairly representative Strong Sustainability prescription:**

- Replace extracted exhaustible resources (e.g. replace fossil fuels with renewable energy) in value terms
- For renewable resources, replacement in kind – cut a tree, plant a tree
- For critical natural resources, no net loss
- Some renditions focus SS accounting at the most local level – cut a tree here, plant a tree here
- Ecologically-informed SS concepts focus on particular natural resources, but emphasize resilience rather locking some snapshot ecosystem in place

ii. Sustainability at What Scale?

- **Weak Sustainability**

- Finds virtue in factor mobility and utility in getting the prices right
- Tolerates depletion of some resources so long as the rents are reinvested
- Scale is implicitly global – offers little assurance for regions and communities facing decline resulting from factor mobility in response to “the right prices”

- **Strong Sustainability**

- At a national level, would tolerate decline of some regions and economic sectors – even replacement in kind does not necessarily require replacement in place
- But there is also a tradition of local strong sustainability

iii. What about Sustainable Communities?

- **Weak Sustainability**

- Sustainable communities is not an explicit issue

- **Strong Sustainability – there seem to be 2 quite different concepts of sustainable communities**

- Communities organized to achieve some degree of strong sustainability at the local level
 - “Think globally, act locally”
- Communities that are themselves sustained in place, providing an acceptable quality of life into the indefinite future
 - Perhaps a certain population, wealth, economic base, etc. must be maintained indefinitely
 - Perhaps higher levels of government have an obligation to provide at least a safety-net of economic viability and essential services, even for declining communities
- The concept of sustaining communities has little relationship to the Weak Sustainability – Strong Sustainability discussion
- Sustaining economic sectors or industries in place has similar motivations and similar problems

3. Are Weak Sustainability Policies Enough?

- Suggests second-best policies to approach WS
- Suggests the full complement of Strong Sustainability policies
- Suggests Weak Sustainability policies for business as usual, but subject to Strong Sustainability restrictions for threatened D_i
- Suggests a commitment at least to safety-nets for communities
- Suggests supports of various kinds for, e.g. irrigated agriculture
- Suggests explicit precautionary remedies addressed to extraordinary risks involving particular resources

Note: this is the first explicit mention of risk

4. What Concepts of Sustainability Inform the MDB Plan?

- Manifested in substantial efforts to encourage water trading and transfers among sources and uses
- Of course there are various public investments and administrative adjustments that undermine getting the prices “all the way right”
- But the “getting the prices right” stance is surprisingly strong

- EFF is justified in the draft Plan as necessary to sustain and restore the riverine environments
- But (remember D. Hume) recommendations require 2 kinds of premises: statements about how the world works, and statements about what is valued. Why are sustained riverine environments valued? Because ...
 - People like them?
 - They are intrinsically valuable?
 - Whether or not we care about them directly, they are essential to long-term production of things we do care about?
 - Destroying them would entail unknown chances of serious harm?

4. What Concepts of Sustainability Inform the MDB Plan?

- **But would the draft Plan have been substantially different if WTP had fallen just a little short of justifying EFF?**
- **Perhaps so. But precautionary and SS commitments are hard to distinguish conceptually or operationally.**
- **Not necessarily. Coherent SS and precautionary policies will attend to proportionality (remedies should be in some sense proportional to the threat) and a fair sharing of burdens**

5. The MDB is a substantial regional economy. Can/should it thrive despite increasing water scarcity, on-going reallocation of water to higher-valued uses, and the draft Plan's commitment to EFF?

- **But such successes have an idiosyncratic character. At a more aggregate level, endowments tend to be stronger predictors of local and regional economic growth than local initiative (Partridge)**
- **But it must be transitional – it should not entail a commitment to keeping declining sectors and communities on life support indefinitely**

6. The draft Plan is contentious in the MD Basin – and the federal government seems to be distancing itself from the Plan

- **MDB is the nation's major inland river basin, in terms of demographics, agriculture, and economy**
- **Within any region, local, regional, and sectoral impacts dominate discussion. This tendency may be exacerbated in regions where government historically has played a prominent role in providing resources and/or setting prices**
- **In the MDB case, the nation is likely to take regional concerns seriously**

- **Superficially, it is hard to object to the Triple Bottom Line concept**
- **Digging a little deeper, it seems clear that the Triple Bottom Line is undefined, and therefore malleable in operational terms**
- **In typical renditions, it is inconsistent with Weak and Strong Sustainability**
 - **It is concerned more with impacts than with welfare (the WS objective)**
 - **Pursuit of balance (itself undefined) across the 3 “bottom lines” challenges the draft Plan's commitment to SS, and may in practice weaken commitments (of any kind) to the future**

- **It does not help that the discussion became polarized *before* a convincing rationale for Strong Sustainability restrictions was offered**

7. Conclusions