

## Comments on Hamlet's paper

### Proposed outline

#### A. **Introduction**

B. **Description** of Existing Water Development and Management Systems: how does the system work now (and why)

1) water law: the allocation of rights (but only half way as no established market to sell the right) (see section 5)

2) distinction between management of floods (public safety ->centralized authority vs. low flows (allocation of scarce resource ->political economy, not market economy)

3) Support services/technical capacities

C. **Assessment** of Current System as an Adaptive Mechanism (to low flows)

1) Experience of small systems (including dam removal, Seattle municipal, water markets, drier areas)

2) Experience of large system ( ESA salmon )

D. **Prognosis** for Improvement of Adaptive Capacity

1) is scaling up possible?

2) what is required for large systems

3) technical advances

#### 4) General points

It is important to make clear what is figure and what is ground. Water planning does not have institutional issues. Rather, the institutional arrangements that regulate water use set the context for water planning. Thus it is essential to illuminate the reader about the institutional arrangements and then assess how well these arrangements support adaptation, with planning being of course a certain part of that adaptation.

a) If low flows were seen as equivalent to threats to life and property, a centralized authority would probably have arisen. In the absence of that perception and the continued absence of a market mechanism, water allocation remains a political/legal issue: we solve it through petitioning the state, not through a market.

However, the notion that there could be a "centralized authority" implies that that authority operates on a clear definition of net social welfare in a low flow situation (similar to that of preservation of a) life then b) property in high flow situations). If one premises the potential existence of such a centralized authority one should be clear that one is unavoidably premising the existence of some method for arriving at maximum net social welfare different from the "first in use, first in right" method. It is not obvious what method might be.

b) Existing US water law represents a particular conception of the resource, in which one obtains a right to use a resource which one does not own. It has value and modulates investment but is not a priori saleable. At least in theory the state retains primacy but allocation is therefore a judicial/political, not a technical, process. It is a half-born property right and reflects a form of institutional stationarity similar to climatic stationarity. Just as climate stationarity assumes the supply will not change,

the water rights system assumes the use will not change. Both are not just maladaptive but anti-adaptive.

It could be helpful to add a couple of sentence to indicate how the Canadian water licenses are functionally different (it they really are).

c) I agree that the salmon issue indicates that the institutional arrangements governing the main stem do not provide a strong basis for adaptation. I am still a bit unclear why. The paper seems to say that the operational agencies can break the law with impunity. If true, it would be important to examine why this is. That is, the institutional failure is not that agencies don't obey the law, it is that there is no sanction. This section needs to state clearly in positive (vs normative) terms hypotheses regarding the origin and nature of the failure. (Alan has not been particularly normative in his approach but it remains very important that the article give nearly clinical descriptions of the failures.)

#### 5) Specific points

a) lines 217-225: this section seems to imply that policy making in the water resources field is not governed by statute but is a product entirely of executive branch prerogative. Is this so? What is the legal mandate for planning? The observation made in 223-225 could lead to a conclusion that what is required is a statutory basis for planning, which would survive the change of administrations.

b) line 226-230: that water rights function as if they were property is a central issue that should be raised earlier in the paper. An interesting contrast would be of the US system to that in force in China.

c) line 255-258: the contrast between the institutional arrangements related to high flows and those related to low flows is also central that should be raised earlier in the paper. see also lines 439-448.

d) line 261 While it is fun to say "archaic", it would be more effective to show how the laws are maladaptive. "Archaic" sounds very much like an elitist and somewhat dismissive assessment, particularly in light of the social investment in water rights, cited in lines 270-276.

e) lines 284-297: an important set of conclusions. One thing missing is that making water markets work for environmental goods requires that the public allocate funding so that fish can compete on the market to buy the water they need.

f) lines 317-320: some more details on how the Snake River management plans were able to prioritize the use of scarce water might be helpful (was it water bank? could fish bid? was it a negotiation among users?) Some more details on the antecedents of the dam removals could also be helpful. Are they accidents of history? Should we expect more of them? Are they likely to be a mechanism whereby the system is rebalanced?

g) lines 468-521: it would best to cast the conclusions here as hypotheses, as not all the key points here are documented with citations.

h) "lack of a centralized decision making body": Is it really the lack of "centralized body" (not sure exactly what that would be; see earlier comment) or is it that agencies don't do what they say they are going to do, and that there is no sanction when they fail?

i) lines 481-489 : is the problem really that the logic of how an action contributes to the goal is unclear, or is it that, all logic aside, the Fisheries service cannot enforce the law? Are low flow targets merely "recommended" or are they required? And if they are required, why is there no sanction when they are not met? It is not clear that the institutional arrangements are at fault (it is plausible for a scientific agency to set targets and management agencies to achieve them). The failure seems to be in the enforcement mechanism (which is, yes, part of the institutional arrangements). Do we need to posit intervention in the enforcement process by elected officials? Are there instances of Congressional delegation calls to agencies to explain decisions or even directions?