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Federal hydrological Systems

why are they so difficult to manage?

Definition? federal hydrological system

A federation is a political system where responsibility for public policy is divided between the national government and state/provincial governments so that the latter has a substantial degree of autonomy from the former in relation to a number of defined issues when making policy and management decisions in its own jurisdictional territory.

- 'federal' is useful and acceptable
- This is a distinctive group which shares issues of substance which distinguish its systems from other hydrological systems but there is a better term
- The proposed grouping is not based on significant issues so why bother?
- Comparisons are a waste of time because major hydrological systems are so different from each other so – again – why bother?

Federal Rivers

Environment condition-resource security

- Colorado
- Murray-Darling

Murray Darling - Colorado

- National govt role important but poorly defined
- Cost benefit analysis are conducted from sub-basin State perspective (Aust railways)
- People downstream and over the border don't vote and don't count
- Inconsistencies of monitoring/data make it hard to base basin-wide policy on consistent info.
- Agreements between jurisdictions are weak, not comprehensive and hard to enforce

Examples

YES – Murray-Darling, Great Artesian Basin, Colorado, (apologies Mexico), high plains aquifer USA, Rhine, Yangtze, Yellow and the Orange (planned)

NO – Nile, Danube, Rio Grande, Mekong, Indus, the groundwater aquifer under Algeria, Tunisia and Libya, Tigris-Euphrates

Why is the top group not in better condition?

Contemporary water management

The River Murray Waters Agreement did not purport to deal with problems arising from tributary rivers; problems caused by adjacent land use; problems of erosion, water shed management and river protection; problems of water quality and pollution from agricultural or other sources; the needs of flora and fauna; possible recreational, industrial or urban uses of water; and the environmental and aesthetic consequences of particular proposals. In terms of modern principles of basin management, the Agreement was thus deficient in that it failed to acknowledge the hydrological interdependence of the system; the dependence of quantity and quality on adjacent land-use; and principles of multiple objective planning and operation of structures

(Sandford Clark 1982)

Complexity of water issues

- Difficult temporal/spatial scales
- Limits
- Irreversibility
- Urgency,
- Connectivity / complexity
- Uncertainty
- Accumulation
- Moral/ethical dimensions
- Novelty

(Stephen Dovers)

National water debate participants

Murray-Darling Basin

- Irrigation, industry, urban centres - consumers
- International organizations (Ramsar, treaties, Agenda 21 etc)
- Commonwealth - State governments (and local Govt)
- Public media – newspapers, television, radio etc
- Education systems
- Regional CMAs and water management agencies (GMW, MI, CIT)
- Universities, CSIRO, R & D corporations, Wentworth Group etc
- Consultants in various manifestations (corporate memory)
- Agribusinesses, AFF, VFF, Banks, Woolworths, Coles etc
- Indigenous and Environment groups
- The courts
- The public at many levels - powerful but intermittent

Federal Dynamics between jurisdictions

- Nature of agreements made between govts is different from those made between govts and institutions that are not govts
- Govts do not impose penalties on each other in the same way that they do on non govt institutions and people
- Heads and senior ministers of governments interact with each other as elected officials with an extra dimension of independence that comes from being elected rather than appointed
- A federal system has more governments and more elections so that at any given time elections are a looming prospect for some

Federal Dynamics administrative zones

- Incompatibilities/inconsistencies of laws and regulations are more likely between jurisdictions than within them
- Distinct legal & administrative zones with their own cultures and patterns of behaviour evolve around the separate bodies of law and regulation that are created by each jurisdiction (eg NSW and VIC)

Federal Dynamics spheres of influence - lobbying

- Around each jurisdiction there develops distinct media, lobbying and NGO group activity
- Lobbyists can go jurisdiction shopping and play one govt off against the other

Federal Dynamics voters

(particularly when bicameralism is combined with federalism)

- Different voting methods produce different results (Aust Senate v H of Reps)
- Voters choose differently for different levels of government
- Federal systems are likely to have greater ideological diversity among decision makers – and more of them - than unitary systems

Engines, brakes and steering wheels

- Federal political structures provide more opportunities than unitary systems for a wide range of interests to influence and access power (if only to block)
- Federal systems make it more difficult and more urgent to develop institutions that promote decision making and implementation (and rapid evaluations of policy/management).
- How to balance the capacity for action against the need to assess results and consider risks is a perennial issue for students of comparative politics

Water Act 2007/8

- Nat Govt displaced the states and took control of high level planning (states are to implement 10 year sub-plans within the basin plan)
- Basin plan to be developed by 2011 (based on the requirement to achieve E sustainability-stability)
- Basin-wide environmental sub-plan
- Basin wide caps (surface and groundwater)
- More transparent and better info base (independent auditing by national agencies)
- increased water trading across borders

Challenges

- Will be difficult to establish distance from daily politics
- Implementation will be disputed by many interests
- Process to ensure state 'cooperation' are tortuous
- There is still strong resistance from key stakeholders to any process that reduces allocations (National Party)
- Future of water management in the MDB part of a much larger, very confused debate about the future of the Australian federal system

How can we strengthen capacity to act?

- We need more focus on transaction costs and reforms that increase capacity to adaptively manage in real time
- Who should audit transactions costs and adaptive management capacity?
(We did it for national competition policy - why not water?)
- Challenge recognised by drafters of Aust Constitution and R M commissioners (Interstate Comm, 1920 Prem Conf)

Risks

Failure to implement a comprehensive systems approach in the MDB and introduce sustainable management will:-

- **undermine resource security of established producers and discourage new entrants**
- **accelerate degradation of riverine environments**
- **heighten tension between irrigation groups and surrounding regions as water quality and supply security deteriorates**
- **promote increasingly aggressive water trading**
- **intensify the sensitivity of irrigations businesses to drought and climate change; and**
- **as environmental amenity declines, make urban electorates more hostile to irrigation communities.**

Conclusion

- There is benefit to be gained from comparing hydrological systems where the quality and nature of the interactions between national and state/provincial governments has a major impact on outcomes
- The current reforms in the MDB are a transitional stage and are not yet mature
- We need a stronger focus in the MDB on transaction costs and the capacity for adaptive management