

Critical lessons for basin planning



Alluvium experts reflect on recent basin planning related experiences in Australia, India, Myanmar and Thailand to draw 10 critical lessons for effective basin planning

River basin planning recognises that water resources and the consequences of their management operate across the boundaries of nations, states and other political and administrative units. Using the basin as the planning unit, a basin plan establishes how water resources will be managed to meet social, economic and environmental priorities.

By taking a systems approach to management, a basin plan has several benefits over traditional administrative border-based planning approaches.

Benefits of a basin planning approach include assessment of planning impacts at a system level, delivering 'whole of basin' solutions, understanding interactions within and between sub-basins, ensuring sector planning is integrated, resolving upstream-downstream conflicts and motivating more efficient water use.

Basin planning is complex as it involves multiple layers of governance, a constantly changing physical environment, competing interests and tough political decisions. Even in basins which are globally seen as basin planning success stories, there are ongoing challenges. Recent controversies surrounding water use in the Murray Darling Basin provides a good example.

Alluvium has been involved in basin planning related initiatives in Thailand, India, Myanmar and Australia over the last several years. These countries represent four very different social, environmental, economic and institutional planning contexts as well as being at different stages of basin planning.

From these diverse experiences we have identified 10 key lessons for effective basin planning:

1. Recognise and respect the complex institutional and governance structures you are working within. National and basin scale programs are often developed through an obscure and convoluted pathway. This can lead to confused basin planning objectives, complex and contested implementation and challenges in delivery. For example, in countries where water management is a state subject, federal and state governments often have a different understanding and objectives for basin planning which makes basin cooperation contentious. It is important to understand, accept and respect these structures. Building relationships within and between institutions is essential for enabling consensus and to move the planning process forward.

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2. The basin planning process needs engagement and buy in at all levels. The basin planning process will stall if there isn't good engagement and ownership at all levels, from individuals to state and national governments. The level of engagement will be different between stakeholders, but must always ensure their eventual buy-in to the plan outcomes.

3. A clear process needs to be established so that responsible agencies know what they are expected to do and stakeholders understand how they can contribute. A planning process which all parties understand and are committed to will have a higher chance of building support for a solution. This is being done well for the basin planning process currently underway for the Ayeyarwady Basin in Myanmar, where a clearly established process for developing the plan is in place. In other countries there is uncertainty on what the planning process is, which is causing delays in basin plan development despite high level political commitment.

5. Work at multiple temporal and spatial scales. Water management activities and outcomes occur at multiple temporal and spatial scales. For example, ecological restoration can take decades but funding cycles are normally three to five years. Planners must clarify and be transparent about expected response times and scales and provide an underpinning logic to understand outcome trajectories.

4. Establish a baseline. It is important to develop a baseline understanding of the basin as well as the

trends in environmental, economic and social drivers. This provides a reference against which basin management interventions can be assessed.

6. Start with common issues of concern. Initially, it is important not to try to solve all the issues at once. Start with identifying issues of common concern. These typically include water quantity (supply-demand); water quality; and flood management. Identifying issues of common concern will serve to draw key stakeholders together around areas of mutual interest and priority needs, enabling the planning process to begin.

7. Integrate environment and cultural issues from the start. It is expensive to retrofit plans and infrastructure to address ecosystem degradation. For example, Australia has spent \$3 billion on buying back water for the environment as part of the Murray Darling Basin Plan. It is more efficient to ensure that the environment is recognised from the beginning of the planning process. An important avenue to ensure the environment is included is to value ecosystem services. This provides an economic basis for environmental protection, as is being done in Myanmar for the Ayeyarwady Basin.

8. Modelling can be used to inform planning, but decision makers still need to make subjective decisions. Catchment, water quality, hydraulic and economic modelling can provide valuable information on the current status of a basin and the possible impact of management scenarios, but political and normative decision making are also required. Models need to support decision making

processes, and methods to integrate them into decision pathways are critical to enable informed decisions. It must also be recognised that models are mathematical representations of complex real-world situations, so their accuracy and uncertainty need to be understood.

9. The plan needs to provide a mix of demand and supply management to ensure optimal use of the available water resources. This involves managing water demand from the public, industry and agriculture through economic and infrastructure approaches; and managing, and where required increasing, the water supply available. Multiple interventions are needed ranging from soft (plans, regulations, economic incentives, capacity building) to hard infrastructure. Unintended consequences of these interventions must be considered.

10. The plan needs teeth. The plan must be enforceable, to ensure sectors, states and individuals affected by the plan follow its directions. This can be done through legislation, budget controls or incentives. For example, in Australia the Murray Darling Basin Plan has legislative backing which gives it legal power to enforce its provisions. In other countries, basin plans have not been effective where River Basin Organisations do not have budget or legislative power to enforce the plan, and water development is continuing on sector by a sector and project by project basis.

Written by:

Simon Tilleard; Jim Binney; David Winfield; and Tony Weber