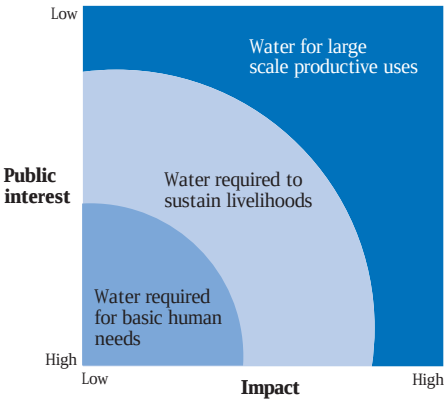


Proposed approach to balancing water resource impacts and public interest being tested in South Africa.

enhanced for many people. But this success has not come without a cost.

Projects based on water-related 'myths' and implemented without due regard to water resource constraints often fail to meet environmental sustainability criteria or to deliver the expected benefits to the very poorest communities. Reduced water availability may even rob them of water for basic human needs. To make things worse, less vulnerable people may not have the resources to continue exploiting diminishing water supplies, further contributing to the inequitable use of resources.

Some projects may also contribute to inter-sectoral, water and energy resource conflicts. In some southern Indian States, as much as two-thirds of all the electricity generated is used to pump groundwater for irrigation.

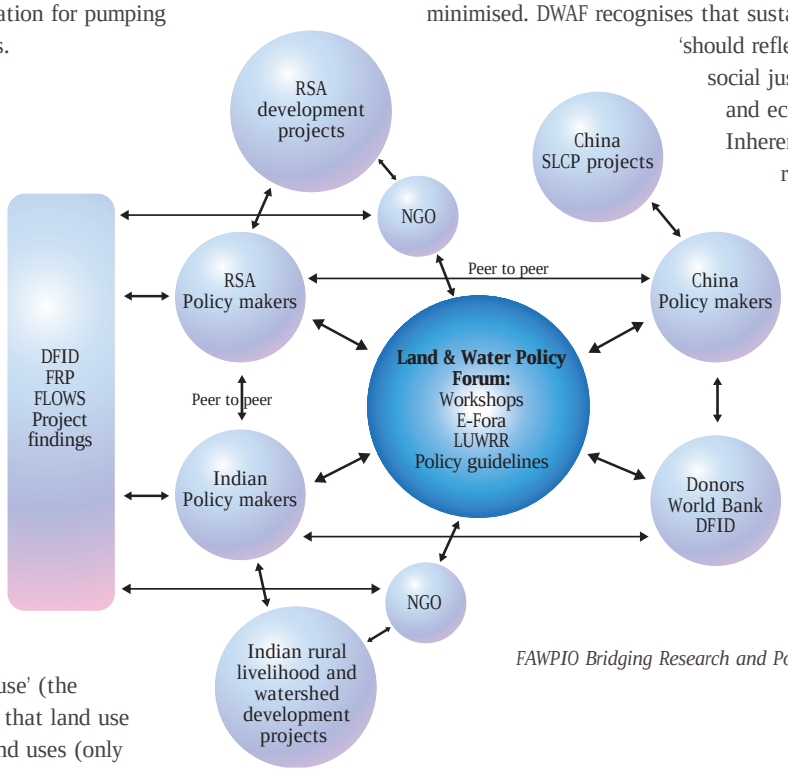
The promotion of forestry, irrigation and soil water conservation measures, particularly in catchments which are approaching closure[1] has often had the perverse and inequitable effect of reducing the availability of 'public' water in communal village tanks yet increasing the 'private' water available to farmers with access to deep groundwater resources. The promotion of irrigation that involves mining groundwater and the substantial lowering of water tables is unsustainable in the long term, leads to 'boom' and 'bust' cycles in agricultural production, and incurs huge costs in terms of electric power generation for pumping groundwater from greater depths.

Green Water and Allocation Equity – an improved framework for land and water management?

South Africa is at the forefront of research into the hydrological impacts of land use change and the development of innovative land and water management policies. Many of these policies are focused on catchment runoff (sometimes termed Blue Water) and on maintaining a portion of this for ecological 'use' (the ecological reserve). Recognising that land use can alter stream flow, certain land uses (only commercial forestry at present) are now defined as 'Stream Flow Reduction Activities' (SFRAs) with the aim of charging owners of SFRA land for the water they consume.

'Green Water' policy instruments (using Falkenmark, LUWRR 2003, Green Water and Blue Water terminology) are seen as an alternative approach. They focus more on the portion of rainfall – in arid and semi-arid conditions usually the greater portion– which leaves the catchment in vapour form as evaporation (Green Water). For South African catchments, typically only 10–30% of the rainfall generates runoff in the rivers. Green Water policy instruments recognise that different land uses evaporate more or less water as green water, and that this could be managed through SFRA by charging for high water-utilising land uses and possibly by payments for low water-utilising land uses such as dryland agriculture.

Allocation Equity is a mechanism being developed in the South African Department of Water Affairs and Forestry (DWAF) for the equitable allocation of catchment runoff amongst all users – including the poorest – while ensuring that the water use is both in the 'public interest' and that changes in allocation are negotiated in a sensitive and transparent manner between users. Impacts on 'investor confidence' and commercial returns are thus minimised. DWAF recognises that sustainable development 'should reflect a balance between social justice, economic efficiency and ecological integrity'. Inherently, this approach recognises that achieving more equitable allocation and use of water promotes social stability and is therefore, in itself, in the public interest. Plus, the process promotes shifts towards more beneficial water uses that realise greater economic returns and employment opportunities.



FAWPIO Bridging Research and Policy network.

[1] *Closure (using IWMI terminology) occurs in a catchment when supply equates to demand (i.e. when all available water resources are fully allocated). Initially, this will only occur in 'dry' years but if demand continues to outstrip supply, closure will also occur in average and 'wet' years.*