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Water: Sharing works best

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Recurrent food crises have added urgency to the focus on poverty reduction in Africa during 2005, which also saw the start of the UN 'Water for Life' decade. Rarely far from view has been the experience of Ethiopia. As recently as 2003, the failure of *belg* (short) rains triggered the delivery of 1.5m tons of international food aid to 11m people – the largest ever response in that country.

Averting such crises is now central to water policy debates. An increasing emphasis is on new infrastructure, both for water storage and irrigation. The Africa Commission Report calls for a doubling of land under irrigation in Africa by 2015, and an interim increase of 50 per cent by 2010. The World Bank too, is supporting increased storage infrastructure, citing a relationship between rainfall variability and GDP growth rates in selected African countries, including Ethiopia, as evidence that African countries are partly 'hostage to hydrology'.

Yet challenges to the assumed links between water storage, irrigation expansion and enhanced food security and poverty include new thinking on cross-border joint water management arising, inter alia, from World Bank support to the Nile Basin Initiative (NBI).

The nine (out of 10) riparian countries which make up the NBI cover roughly a third of Africa's population of 900m, half of whom live on less than a dollar a day. The guiding principle of the NBI is to look beyond national boundaries to ways of optimising and sharing equitably the benefits available to all through better water management, allocation and use.

This takes the debate about food-water linkages beyond the purely national level. In a water-scarce and rainfall-dependent region, national irrigation expansion may not be the best approach for each country. Greater irrigation expansion in one may generate greater benefits for all, and reduce associated costs.

This raises three key policy questions:

Blue Nile ('Abbay') valley in Ethiopia (©ODI)

- Is irrigation the best use of water resources in a given country if expansion elsewhere can increase 'crop per drop' and reduce shared negative social and environmental costs?
- Do the mechanisms exist to set up regional benefit-sharing arrangements to enhance overall regional food security and channel benefits to the food-insecure parts of a basin, including across borders?
- In the context of longer-term climate change in water-scarce regions, is water for agriculture the best way to secure long-term poverty reduction, environmental protection and social development?

These regional issues pose a second set of questions surrounding resource management at a national level. Given the very high cost of irrigation in countries such as Ethiopia, what are the key opportunity costs of expansion? Have the involved agencies – governments, donors, NGOs – learnt from past irrigation scheme mistakes and do suitable management arrangements now exist for irrigation expansion in the new social and political environment? If not, problems can arise, as recent negative experience with small dam programmes in the Horn of Africa has shown.

Here, poor management and regulation has exacerbated local disputes over rights to water and land while a lack of watershed protection has limited the lifespan of storage structures.

Finally, understanding the impact of irrigation on pastoral groups – in particular medium and large-scale schemes – in countries of the Horn of Africa has been insufficiently integrated within national decision-making in the water sector. Exclusion of these factors can increase substantially the externalities of irrigation expansion.

Such institutional and policy challenges are acute in Ethiopia, but exist elsewhere in Africa, suggesting that policy decisions about irrigation need to be made within a much broader socio-economic- and political-context. The danger of a target-driven approach such as that outlined by the Africa Commission is that it short-circuits the necessary learning processes, instead pushing existing institutional arrangements to deliver 'more of the same', which, in the long term, may not serve the needs of the poor.

Firstly, decisions about irrigation need to be set within the PRSP processes. This would help integrate the water sector within broader poverty reduction processes including those related to land tenure, environmental protection and livelihood diversification. To small-scale, rain-fed farmers in highland Ethiopia, for instance, preventing land fragmentation and soil degradation are probably at least as important as providing irrigation, and possibly more so.

Secondly, irrigation choices must be made within 'smart' decision-making environments which are equipped to manage the complexities of storage development, low-flow years, flood management, environmental protection and competing demands for the resource by diverse user groups.

Getting it right in Ethiopia, as elsewhere in Africa, requires an effective resource-management environment that goes beyond linear thinking of the 'more water leads to higher agricultural production leads to greater food security' kind. As development practitioners, we need to look closely at local irrigation 'histories', but also more broadly to ways in which shared benefits can be optimised at a regional level. Under the NBI, Ethiopia has taken an important step forward regionally, but getting it right at a local level remains a major challenge, as it does in many Nile basin countries.

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