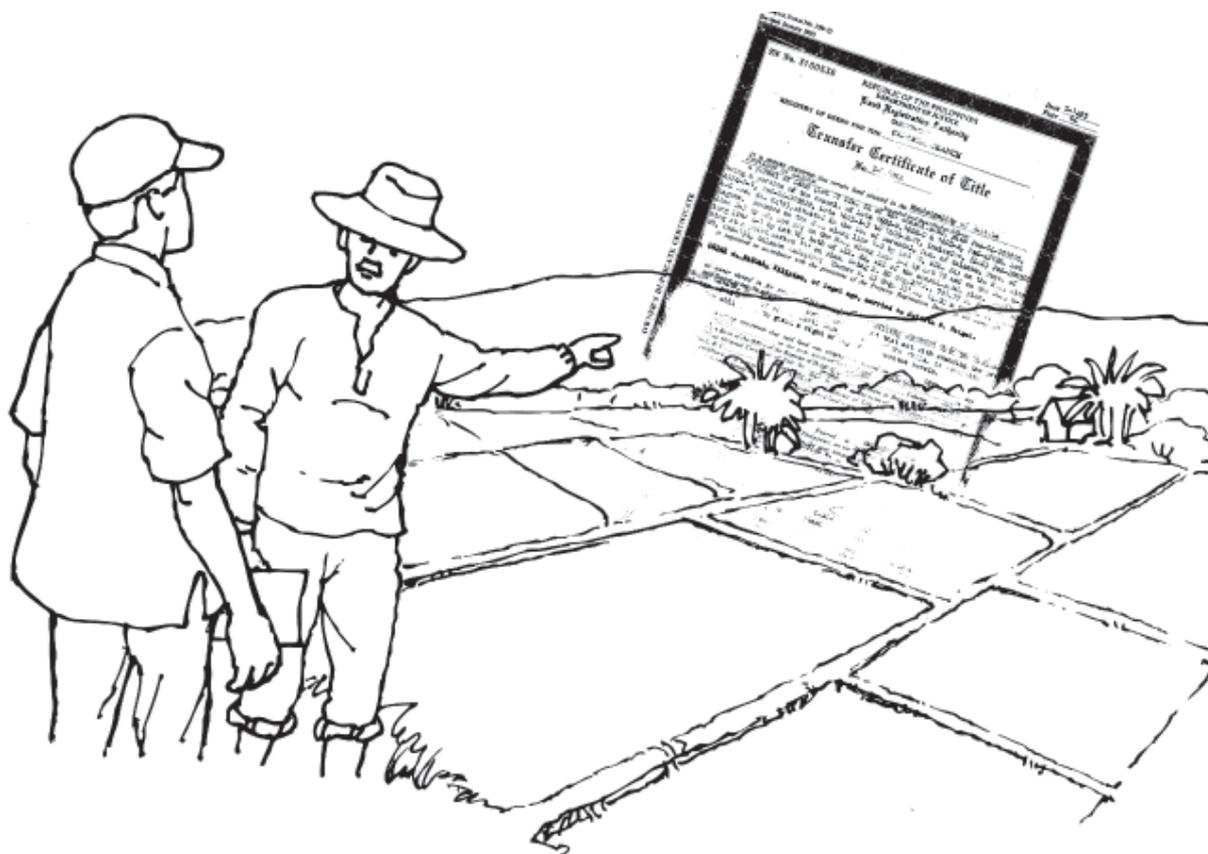


How Institutions and Organizations Contribute to Making Water Accessible to Farmers



Experience in the past 30 years of irrigation has shown that technology alone is not sufficient to reduce poverty, enhance food security, and increase rural livelihoods. In many cases, farmers have not adopted or maintained the technologies, or the poor, women, and other marginalized groups have not enjoyed the benefits of technologies. In this context, institutions and organizations of collective action can help farmers acquire and adopt the technologies that best fit their needs.

SOURCE:

Meizen-Dick, R. 2007. *Institutions, Organizations, and Water Access*. Paper presented at the Agricultural Water Management Strategy Meeting on 26-27 November 2007.

Importance of Key Institutions for Agricultural Water Management

Figure 1 illustrates the importance of two types of key institutions for agricultural water management. The vertical axis illustrates the spatial scale of a technology, from an individual plot, through a whole farm, to one that covers several farms, a village, or a region. All approaches that are above

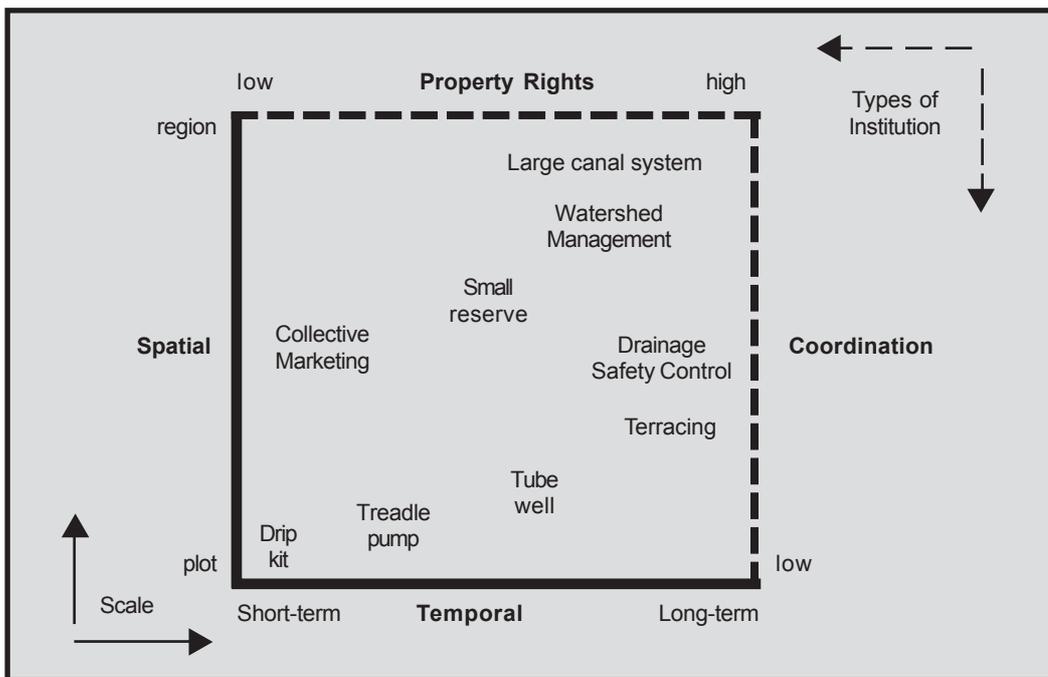


Figure 1. Institutions for Agricultural Water Management.

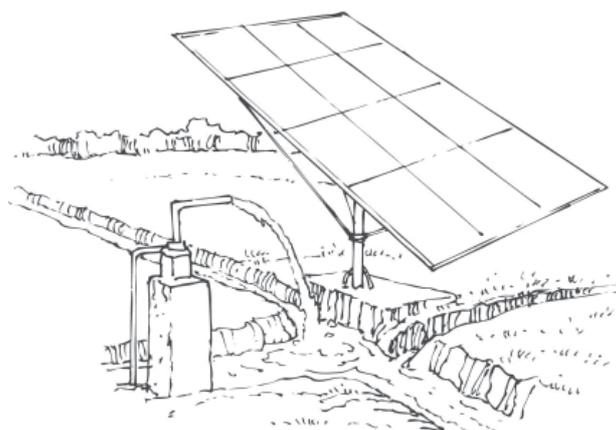
the scale of the individual farm require some form of coordination—either by local organizations, the state, or the market.

For example, a drip kit may be adopted by an individual small farmer, and even many tubewells serve just one farm. Where holdings are very small and tubewells have large capacity, farmers may join together to buy and operate a tubewell, or the state may install and operate it, or one farmer might install it and sell water to neighbors.

How well each of those institutions functions will determine whether smallholders receive adequate and timely water supplies. Even if a drip kit can be operated independently by one farm household, access to the kit within a farm household will matter. Depending on the water source or the return flow, other farms might be affected and collective institutions come into play.

Similarly, the horizontal axis indicates the permanence of a technology or approach, or the time frame to cover the investment. The longer the temporal scale, the greater the need for property rights to provide authorization and incentive to make the investment.

Even a tenant or a wife without independent land rights can install a drip kit, but may not be allowed to install a treadle pump or tubewell, and may not have the incentive to install and maintain terracing or drainage systems for salinity control. Even if farmers have secure rights to the land, they may not be willing to invest in irrigation systems if they do not also have secure rights to the water. This has been the problem with many irrigation management transfer systems, where farmers are expected to bear the costs, without secure rights to the water from the systems.



While the exact location on this figure would depend on the size and scale of the farms, as well as the cost/return ratio of the particular technology, this provides a useful starting point to ask about which institutions are likely to be critical.

Nevertheless, important institutions is relatively easy compared to ensuring that these are in place. Analogies of “social engineering” have been misplaced, because they imply a mechanistic approach. Rather, institutions are organic and path-dependent — they cannot be simply imported from one context to another. This requires a more nuanced approach, which may require mutual adaptation of the physical and institutional environment.

Coordination Institutions

The example of the tubewell cited above illustrates that coordination functions can be provided by the state (a public tubewell that supplies many farms), collective action (farmer group), or markets (farmer selling water). Which institution is most appropriate depends on the particular conditions — e.g. scale, technical sophistication of the technology and the farmers, and cultural factors (social capital, market orientation). In general, the advantages of the state are greatest at the largest scale; collective action at more localized levels, and markets are highly variable in whether they provide effective coordination among smallholders.

If group-based approaches are selected for water management or technology dissemination, it is important to look beyond formal rules and membership roles to see whether the group is actually acting collectively and who is included and excluded from active membership and decision-making. This means asking about women as well as men, landowners and tenants, farmers and other water users (e.g. fishers, livestock keepers, home gardens, domestic users, other enterprises). There may be formal as well as informal barriers to participation, different motivations and returns to be considered.

There are indications that organizations with the active participation of men and women may be more effective in managing resources like water because they draw upon the skills and resources of both, but the costs of establishing active mixed organizations are also greater than single-sex organizations, especially where there is high gender segregation in the society. All of these factors should be considered when identifying which groups to work with, particularly if that organization will gain stronger control over technology or water itself. Furthermore, just setting up the organizations is not enough for sustainability: they also need to become internalized and ‘institutionalized’.

Water Rights and Access

Many poor people do not have formalized rights to the water they depend on for their livelihoods. Strengthening their rights, which may involve getting the government to recognize them as legitimate claimants, will help increase their security and provide incentives for investments — even if very small — in agriculture.

But just passing laws and regulations will not necessarily change water rights, as they do not derive only from government law. A wide range of customary laws and practices, religious law and interpretations, and project regulations also relate to water rights, and people may base their claims on any of these.

A better approach is to start with people's experiences with water—how they access it, what claims they make for their different water uses, etc. This will help to identify the relevant legal frameworks to address. Then an intervention can work to strengthen the claims of poor people for their important water uses. Ensuring that women, smallholders, livestock keepers, or other poor and marginalized water users are represented in those organizations is an important step to strengthening their water rights.



Conclusion

It is not technology alone that contributes to efficient water governance, but an interplay of roles among state, collective, and market institutions. Instead of trying to import new institutions, policies should then seek to identify the strengths of the existing institutions and build from them. The next step is to look for the connections between different types of institutions so they can strengthen each other, for example, by agencies providing financial training to water users groups or user groups creating accountability for government agencies.

To have a real impact on water management, the results of research must be built in to adaptive learning that strengthens the capacity of the state and water users to address evolving challenges: a process that requires going beyond panaceas.



There is a need to start by asking people how they access water, and what claims they make for their different water uses. This will help to identify the relevant legal frameworks to address.

Suggested Reading

Meinzen-Dick, R. 2007. *Beyond Panaceas in Irrigation Institutions*. Proceedings of the National Academy of Sciences 104:15200–15205.

Sourcebook on **Resources, Rights, and Cooperation**, produced by the CGIAR Program on Collective Action and Property Rights (CAPRI)