

# MICROCON POLICY BRIEFING

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August 2012 Johanna Kramm, Els Lecoutere and Lars Wirkus



Irrigation system in Tanzania  
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•How are access to and the distribution of water governed in a conflict-prone setting?

•How does power enter the process of negotiating solutions to conflict over water?

## Water and Conflict Prevention

Summary: Water is a scarce and vital resource. There is a spreading perception in the research community that water is – and will become increasingly – a source of violent conflict in the sub-national or local context. In reality, at the local level water users facing water scarcity negotiate their access to water. Institutions also play a role in water related conflicts. The question of how access to and the distribution of water is governed in a conflict-prone setting lies at the heart of this MICROCON research in Tanzania. The focus is on institutional structures and processes of water governance.

### Introduction

Conflictive negotiation over access characterises Tanzanian small-scale irrigation systems. Conflicts occur over the direct extraction of water from irrigation canals between single farmers, and about regulation patterns on the village level between the representatives of the different irrigation canals. MICROCON research in smallholder irrigation schemes suggests that resource conflicts are not necessarily disruptive and that institutional pluralism can contribute to the development of more sophisticated resource governance institutions. But despite the potential of negotiation processes to improve these institutions they can also reproduce deeply entrenched gender relations and hinder inclusion of less powerful resource users who do not always have the

capability to engage creatively in conflict resolutions. Negotiation processes and the ability to access water are therefore determined by the participants' social position and power, as well as their command over resources. While existing institutional arrangements for distribution are comprehensive and efficient, exercising the rules and sanctioning differ according to water availability.

### Tanzanian agriculture background

Agriculture is Tanzania's most important economic sector: it contributes 45% of Tanzania's GDP and nearly 30% of export earnings, while employing over 80% of the nation's work force (URT 2008: 1). A mostly rain-fed system, it remains susceptible to drought and inadequate and erratic rainfall. Irri-

gated agriculture protects against drought and can ensure food security. The largest proportion of the irrigated area (85.000-100.000 of 150.000 ha) is farmed by smallholders using diversion furrows (Kaswamila and Masuruli 2004: 4). Many people depend directly on irrigated agriculture to secure their livelihoods for instance by growing crops out of the normal season. It is therefore essential to understand local processes of water access and distribution. Uncovering local dynamics can also inform policy, counter neo-Malthusian predictions of water wars, counterbalance the idea that the sole challenge lies in 'getting the institutions right' and downscale romanticised views about harmonious and inclusive local self-governance of natural resources.

## **Governance and Institutions**

Governance is understood here as the coordination of collective action (Benz et al. 2007: 9). The governance perspective focuses on formal and informal rules, rule-making systems and actor networks on different societal levels (Biermann et al. 2009: 4). It is concerned with the social negotiation processes of collective arrangements of different actors. Institutions play an important role in the coordination of collective action, since they reduce uncertainty and promote coordination and cooperation among individuals. They structure action and give guidance for patterns of action. Institutional arrangements shape social interactions and the way a resource is accessed and used.

## **Water, governance and conflict in rural Tanzania**

Some fallacies persist about traditional resource governance institutions and their evolution. First, local institutions for governing water are often presumed to be a rather fixed set of 'rules of the game', but in reality these rules are constantly made and remade based on people's practices (Leach et al. 1999). Second, there is a widespread presumption that institutional pluralism is being systematically exploited in opportunistic ways

MICROCON research on water conflict in six village irrigation systems in rural Tanzania explores approaches to conflict resolution and the role of institutions in the smallholder context. In five of the villages, by explicitly relating the way conflicts are solved to a direct measure of the relative power status of all parties involved in the conflict, the studies empirically demonstrate that power relations

are central in pragmatic and creative conflict solving in institutional pluralist contexts. Additionally the studies show that the least powerful do not have the capability to be that creative. In one village, farmer's asset endowment, analogous to power, is shown to determine both access and the way farmers deal with conflict.

## **Local Water Governance in Tanzania**

Water governance in Tanzania since independence has been characterised by legal and institutional pluralism, but post-colonial national policies for water governance have had little impact on the local level (Maganga 2002).

Tanzania has a long history of evolving water management and governance mechanisms (Maganga 2007; Huggins 2000). In small holder irrigation schemes, water has principally been governed by user communities relying on 'traditional' institutions. Both the renewed national water policy (NAWAPO), based on integrated water resource management (IWRM) principles, and the water sector development strategy have introduced a new legal and institutional framework for water governance with greater impacts at the local level (URT 2002; URT 2005).

## **Framing water access Role of Institutions**

For many people sustainable livelihoods are based on access to natural resources. Rural households especially depend on access to and availability of: fertile land, grazing grounds, water, woods and fish grounds. Property rights are important here. These involve a social relationship between the right holder, other people, and an

institution to back up the claim, derived from statutory law or customary law (Meinzen-Dick 2000:7). Property-holders can assert their rights with the associated enforcement mechanism to control access. These different rights, deriving from state law, customary law or convention, are not equivalent. Here access is broadly conceived not only as the right to but as the ability to benefit from a resource (Ribot and Peluso 2003). The capability approach adds the idea that certain assets are crucial for the ability to transform people's access rights in capabilities (Sen 2005). In the negotiation process of accessing water the actors can use and transform different assets (Bourdieu 1983) to enhance their capability to benefit from a resource and to secure their livelihoods. The transformation process should not be conceived as mechanistic, but as social negotiation process with winners and losers.

## **Conflictive negotiation processes**

The negotiation processes of the actors are not solely shaped by institutions, but have to be placed in a web of power where the actor's asset endowment and the structural and relational access mechanisms (like access to capital and labour, authority, social relations) influence the agency and strategies of the actors (Ribot and Peluso 2003). Differently endowed groups of farmers (casual labour; land owning farmers, land renting farmers, investors, rich farmers) are also positioned differently in relation to access and may employ different conflict-solution strategies.

## Case Studies: Six irrigation schemes in rural Tanzania

An irrigation system in the semiarid parts of Karatu District (towards the North) and five irrigation schemes in the semiarid lowland areas of Mufindi District (South East) provide case studies of institutions for resource governance in contexts of conflict over water. Resource governance institutions in the Mufindi irrigation schemes are in flux and have a high degree of local specificity. There are some common principles of 'traditional' or 'informal' water governance institutions dealing with provision, appropriation and enforcement. In conflict management, we observe a clear preference for reconciliation over confrontation. Otherwise, conflict management, rather than being based on well-defined institutions, relies on pragmatic and creative problem solving when disputes arise.

The case study of violent conflict over water in Karatu District spotlights an evolving contention over direct water use. These conflicts are often located at junctions where water is divided between farmers of different canals. Farmers are aware that in conflictive situations where somebody is taking water illicitly from another farmer, they should call the Bwana Maji (water officers) to mediate to avoid violent encounters. Nevertheless, in some cases arguments became heated and violence occurred. The elders' court is the preferred way to solve such conflicts. In this case study both parties did not fully trust the formal legal system. They perceived it as a long, open-ended, expensive procedure which might lead to an unwanted outcome. Corruption is also associated with the formal court;

people generally do not approach it unless they have the support of "rich, influential friends". The elders' court is socially embedded and acknowledged as a reconciliatory solution in contrast to the formal court system's adversarial reputation. People fear a formal court solution will lead to reprisals for those involved. The research highlights the importance to people to be reconciled and for future friendly encounters to be possible.

Yet the Mufindi case study found that "traditional" or purely socially embedded instruments to enforce rules or resolve conflicts are mainly used when the conflict involves offenders with a low power status. If the conflict involves powerful offenders there is a higher likelihood of relying on more authoritative and often more bureaucratic forms of conflict management. These seem to be needed as leverage to deal with powerful offenders. Moreover, reconciliatory solutions to conflicts via an intervention of a mediator often did not seem very effective. Offenders did not change their behaviour or were involved in other disputes later or the village government ultimately had to intervene. This may suggest that some "traditional" ways to resolve disputes may have reached their limits.

Access to markets, capital, labour and water are strongly interconnected, as illustrated by the Karatu case. They play a role in direct water use. Farmers with different endowments and authoritative background have different options for accessing water. For the poor farmers who have to rent land, access to irrigation water is constrained by high rents for plots with good water availability. The

farmers endowed with assets and financial capital can rent good land, and additionally bypass institutional rules by "buying" water. This could be by paying the fine, when illicitly taking water, or by bribing someone responsible for the water distribution. The most violent conflictive arguments occur when farmers do not adhere to the rules and illicitly take water. This happens between farmers from the same canal, normally downstream located canals with constrained water availability, or between farmers from a downstream and an upper stream canal. Nevertheless violent arguments are rather the exception and the institutional mechanisms are strong enough to prevent anarchic situations.

## Policy Implications

The case studies show that water or land conflicts are not necessarily disruptive; they can prompt constructive processes contributing to the development of more sophisticated governance institutions. However, to realise the potential of such constructive responses to local resource conflicts the dynamics of innovation, creative problem solving, locally adapted solutions and legitimation should be appreciated by policy makers (Meinzen-Dick and Pradhan 2002; Galvan 2007). While emphasising local dynamics the role of the state in resource governance should also be acknowledged (Roth 2009). Different state organizations act and interact with other local agents in a creative way. These organizations should therefore be allowed to flexibly interpret national legal and policy principles while responding to local resource challenges (Galvan 2007).

## Policy Implications

### continued...

However such socially embedded local dynamics may lack inclusiveness. Women and the least powerful members of society are less capable of engaging in creative problem solving. As a result they lose out when competition over water or land arises. As these power relations are deeply entrenched, tackling these constraints is a major challenge and the responsibility of policy makers trying to further develop local resource governance institutions.

## Credits

This Policy Briefing was prepared by Johanna Kramm, Els Lecoutere and Lars Wirkus. The views expressed in this briefing are the author's alone. For more details see MICROCON Research Working Papers 23 and 33.

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## Further reading

Biermann, F., Betsill, M. M., Gupta, J., Kanie, N., Lebel, L., Liverman, D., Schroeder, H. and B. Siebenhüner (2009): Earth System Governance. People, Places and the Planet. Science and Implementation Plan of the Earth System Governance Project. Earth System Governance Project Report 1. IHDP Report 20. Bonn.

Bourdieu, P. (1983): Ökonomisches Kapital, kulturelles Kapital, soziales Kapital. In: Kreckel, R. (ed.): Soziale Ungleichheiten. Soziale Welt Sonderband 2, Göttingen, pp. 183-198.

Galvan, D., Sil, R. (2007): The dilemma of institutional adaptation and the role of syncretism. In: Galvan, D., Sil, R. (eds.): Reconfiguring institutions across time and space. Syncretic responses to challenges of political and economic transformation, New York, pp. 3-29.

Huggins, C. (2000): Rural Water Tenure in East Africa. A comparative Study of Legal Regimes and Community Responses to Changing Tenure Patterns in Tanzania and Kenya. African Centre for Technology Studies (ACTS). Nairobi. [http://pdf.dec.org/pdf\\_docs/Pnacl385.pdf](http://pdf.dec.org/pdf_docs/Pnacl385.pdf) (accessed 9 October 2009).

Kaswamila, A., Masuruli, B. (2004): The Role of Traditional Irrigation Systems in Poverty Alleviation in Semi-Arid Areas: The Case of Chamazi in Lushoto District, Tanzania. REPOA Research Report 04(3), REPOA, Mkuki na Nyota Publishers Ltd, Dar es Salaam.

Leach, M., Mearns, R. and I. Scoones (1999): 'Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management. World Development 27(2): 225-47.

Maganga, F. (2002): The Interplay Between Formal and Informal Systems of Managing Resource Conflicts: Some Evidence from South-Western Tanzania. In: The European Journal of Development Research 14(2): 51-70.

Maganga, F. (2007): Customary laws for managing water resources. In: id21 insights 67, p. 2.

Meinzen-Dick, R., Pradhan, R. (2002): Legal Pluralism and Dynamic Property Rights. CAPRI Working Paper No 22. Washington, DC: IFPRI, <http://www.capri.cgiar.org/pdf/capriwp22.pdf> (accessed 9 October 2009).

Ribot, J., Peluso, N. (2003): A theory of access. In: Rural Sociology 68 (2): 153-181.

Roth, D. (2009): Property and Authority in a Migrant Society: Balinese Irrigators in Sulawesi, Indonesia. In: Development and Change 40(1): 195-217.

Sen, A. (2005): Human Rights and Capabilities. In: Journal of Human Development 6 (2): 151-166.

United Republic of Tanzania (URT) (2002): National Water Policy. Ministry of Water and Livestock Development. Dar es Salaam, Tanzania.

United Republic of Tanzania (URT) (2005): National Water Sector Development Strategy. Ministry of Water and Livestock Development. Dar es Salaam, Tanzania.

United Republic of Tanzania (URT) (2008): National Irrigation Policy Draft 2008. Ministry of Water and Irrigation of the United Republic of Tanzania. May 2008. Dar es Salaam, Tanzania.



MICROCON, or 'A Micro Level Analysis of Violent Conflict' is a five-year research programme funded by the European Commission, which takes an innovative micro level, multidisciplinary approach to the study of the conflict cycle.

Almost one third of the world's population lives in conflict-affected low-income countries. At a fundamental level, conflict originates from people's behaviour and how they interact with society and their environment - from its 'micro' foundations. Yet most conflict research and policy focuses on 'macro' perspectives. MICROCON seeks to redress this balance.

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