

FACTSHEET ON WATER MANAGEMENT IN THE USANGU PLAINS OF THE RUAHA BASIN, TANZANIA

Produced by: RIPARWIN (Raising Irrigation Productivity and Releasing Water for Intersectoral Needs): DFID/ IWMI- funded River Basin Research Project in Tanzania

Contact persons: Bruce Lankford, School of Development Studies, UEA, UK, b.lankford@uea.ac.uk; Nuhu Hatibu/ Henry Mahoo, Soil Water Management Research Group, SUA, Tanzania, swmrg@yahoo.co.uk, Barbara van Koppen, IWMI, b.vankoppen@cqjar.org

Authors:
Sokile, C &
B. van Koppen
P.O. Box 74 Igurusi
Mbeya. E-Mail:
sokile@email.com

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Introduction

Institutions regulate and harmonize water allocation among uses and users. There are several institutions that influence water management the Usangu plains. They can be broadly grouped as informal local level and formal state-based institutions. This fact sheet focuses on the customs and local water user groups on one-hand and water rights and water user entities on the other hand and how they influence water uses and users in the Usangu plains.

Operational definitions

- ❑ **Institutions;** are a set of rules, constraints and regulations, both formal and informal that guide daily human interactions to ensure peace and tranquility and minimize costs of transactions.
- ❑ **Institutional framework** therefore refers to the inter-wovenness, inter-correlation and inter-linkage of the institutions to achieve a desired purpose
- ❑ **Street level bureaucrats;** local representatives of various government organizations such as ministries, departments etc.

Water uses and users in the Usangu Plains

There are several water uses and users in the Usangu plains. From January to March in a normal wet year, all sectors get sufficient water and there is no any tension. Long rains end in April. If it was a dry year, concerns over water starts from April to July due to scarcity: for establishing irrigated fields in the middle catchment areas. The crisis period is between August and December where most ephemeral rivers dry up, and even Mkoji River, a key contributor of the Great Ruaha River, which used to be annual, nowadays dries up in this period. In the peak of the dry season, any small flow saved from irrigation or brick-laying sector can make a difference especially for domestic uses downstream. Local water users upstream first allocate water for domestic uses, then for irrigation, livestock, construction and brick-laying. Upstream local water users are not concerned with leaving water to flow downstream for domestic, river flows, H.E.P, wildlife, fisheries and aquatic flora and fauna.

Facts about Water rights in the Usangu Plains

- ❑ There are some 100 water rights in the various rivers in the Usangu plains as at June 2003. There are several applications that have not been issued rights although abstraction is already done. This is already too much abstraction, especially in the dry period. The sectors that does not have rights –like ecological/ minimum river flows, swamps and wetlands and the Ruaha National Park would suffer if all the ‘rights’ are used.
- ❑ The most abstracted rivers are Chimala and Mlowo with 20 and 19 water rights respectively.
- ❑ More than a half (56%) of the water rights are in the Mkoji sub catchment.
- ❑ Mlowo river alone has some 19 water rights, accounting to about 20% of the total water rights in the Usangu plains.
- ❑ The Great Ruaha River is almost the least abstracted. It has only two water rights.
- ❑ The water rights are increasing year after year. At independence (1961), there were only five water rights in the Mlowo river system. By 2001, the number had quadrupled to 19. There are also more than seven pending applications, which are likely to be granted rights. If the trend continues at this pace, by 2011, there will be more than 30 water rights.

Table 1. Nature and number of Water rights in the Usangu Plains

No	Nature of ownership	# of water rights	Percent
1	Private individuals	28	28
2	Government (DEDs)	20	20
3	Government (Parastatals)	13	13
4	Association/ user group	29	29
5	Other	10	10
	Total	100	100

- ❑ Government and various government agencies (DEDs and Parastatals) hold a third of all water rights in Usangu (i.e. 33%)
- ❑ Private individuals also hold about another third of all water rights (i.e. 28%)
- ❑ Water User entities has only about a third of the water rights (i.e. 29%)
- ❑ Why should the government and private individuals hold so many rights? (i.e. two-third of total rights!). Government would show a way by transferring the one third of water rights to water user entities. The private water rights should also be reviewed and the holders should be advised to admit the other users closer to or at the tail end of their fields so that they form a user entity and share the resource.

Impacts of water rights in the Usangu plains

✘ Most holders of water rights were granted several years back and have not been reviewed to conform to the real water demand of the holders and the available river flows especially during the peak of the dry season. For example, Langwira Seed Farm and the NAFCO ranch at the lower plains of Mkoji sub-catchment were granted water rights in 1961 and 1975 respectively, when the former was cultivating the whole land for pasture seed and the latter was keeping a big heard of cattle. To date, both the seed farm and the ranch have retained water rights while less than a quarter of the fields are cultivated, and less than a fifth of the cattle are kept. This is not an equitable management of water resource.

✘ Most ordinary water users and the poor did not acquire water rights in the past, either because they were not sensitized to do so or because of the tedious application procedure. Application procedures for water rights are lengthy, time-consuming and bureaucratic. Why should they not be incorporated in the government and private water rights (that forms 2/3 of the total rights) so that they can equitably benefit from the resource? This is not a pro-poor approach.

✘ Furthermore, the 'right holders' normally abstract water beyond their 'right'. There are no mechanisms to ensure that those who have water rights adhere to the provided abstractions. Users manipulate their gates at their own discretion. River Basin Water Office (RBWO) has no 'street-level' agents to enforce this. Without monitoring of the levels of abstraction, water rights are just another certificate to abstract as much water as one wishes and a potential cause of conflict among the water right holders.

✘ Water rights are not seasonal-sensitive; the provision allows right owners to abstract the same quantities of water in wet as well as in dry season regardless of the available river flow in the peak of the dry period. Once the upstream right holder diverts the whole river, the lower users do not have access, whether they have a right or no. This has brought conflicts in Inyala ward and impacted the downstream.

✘ Once issued, water rights are not transferable or tradable. This arrangement cannot allow a market-based allocation of water to the most economically viable use. If only they were transferable or tradable, Langwira Seed Farm and NARCO would have traded part of their rights to put water in proper productive use.

Facts about Water User Entities the Usangu Plains

Water user entities have various options for registration; they can register as Water User Associations in the Ministry of Water and Livestock Development under the Water Utilization Act; amendment no.8, 1997; in the Ministry of Home Affairs under cap. 337 of the Civil Society Act (like NGOs); or as Water User Groups in the District Councils where they are based under the Local Government Act. No. 8, 1992; as Companies under the Companies Act no. 212, Section 3(1); Cooperative Societies under the Cooperative Societies Act No. 14, 1982; Corporation Sole under the Corporation Act No.25, 1974; and as Trustees under the Trustee Act Cap.375 to the Administrator General in the Ministry of Justice and Constitutional Affairs.

Table 2: Water User Entities in the Usangu Plains

No	Nature of user entities	Number of water rights	Percent
	Water User Associations	16	55
	Water User Group	0	0
	Cooperative Societies	4	14
	Corporation Sole	0	0
	Company	0	0
	Trustee	0	0
	Informal (not registered)	9	31
	Total	29	100

- ❑ The RBWO offers water right to user groups that are registered or not. The office assumes that water use will bind the users together and hence make them feel a need for registration. Water user groups register at their own pace.
- ❑ All the 16 WUAs (100%) are formed by irrigators. Livestock keepers have not formed any WUA! May be they have not been sensitized to form one. This is a serious sectoral imbalance in resources.
- ❑ WUA formation has not explored the intersectoral water uses. The MoWLD also registers users differently! The Directorate of Rural Water Supply registers WUAs for domestic water uses. Irrigators' WUAs have not been registered in

the MoWLD; should they be, they may be registered under the Directorate of Water Resources Management. This may shift water conflicts frontier from individuals to associations; i.e. The Irrigators' WUAs vis-à-vis domestic or pastoralists WUAs incase they are formed in the future, or individual users and other informal groups.

- ❑ The diversity in registration may exacerbate duplication and un-coordination and may as well fail to solve water problems.
- ❑ Currently there are few WUAs in the Usangu plains (only 16), which cannot hold all water rights, and their formation process is taking place at a slow pace and the procedures for getting WUAs registered are tedious, time consuming and bureaucratic.
- ❑ The present WUAs are concentrated in mid catchments, no WUAs in the upper catchments, nor in the lower plains.
- ❑ The scope of operation for WUAs is not defined; it is not known whether they cater for sub-catchment or whole catchment and the operational linkages between/among WUAs in the upper and lower zones of the river is not provided for. There is no guideline for WUA formation.

Comparing Ruaha River Basin with other basins: the table below show;-

Table 3: Water User Entities in Tanzania (Registered by the DRWS under the Ministry of Water)

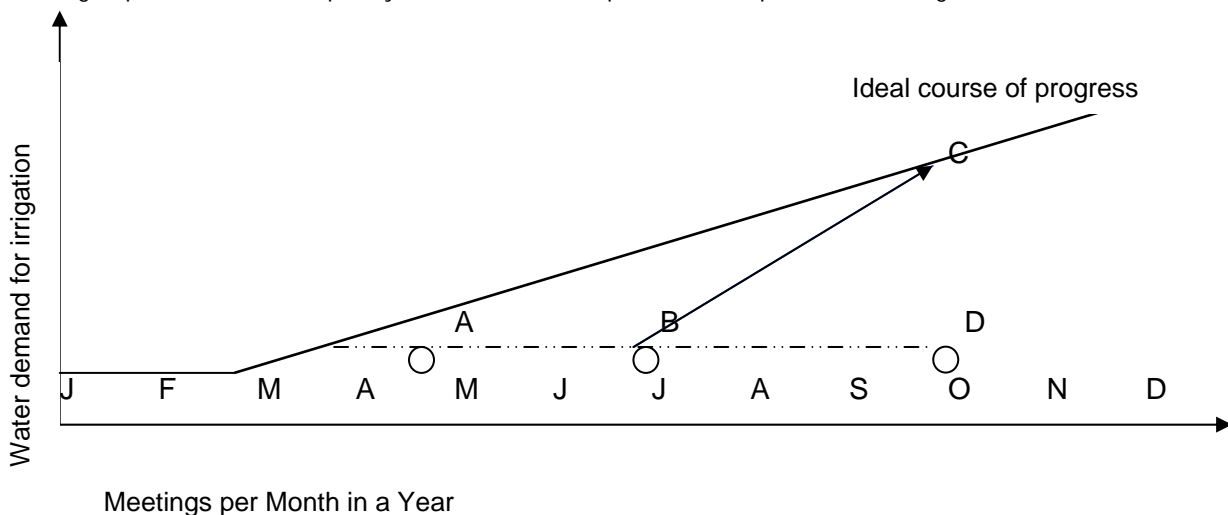
No	Type of Entity	Basin			Total
		Rufiji	Pangani	Victoria	
1	Water User Associations	12	3	25	40
2	Water User Groups	0	0	1709**	1709
3	Water Companies	21*	2	0	22
4	Trustees	0	2	0	2
5	Cooperative societies	0	0	0	0
6	Corporation Sole	0	0	0	0

* All water companies are in Morogoro Region

** All water User Groups are Shinyanga and Morogoro and are made up domestic water users who use pumps.

Out of the six WUAs studies in the Mkoji sub catchment only one or 17% can be described as legal. Others do not meet requirements of WUAs due to failure to hold annual general meetings, regular elections, participatory decision making, if necessary by voting. No single WUA had prepared audited accounts as per the law or their constitutions!

Water user groups do not meet frequently. This affects their operations and performance. Figure.1 illustrates the effects:



Point A, problem related to water allocation is recognized at, say, monthly meeting in the end of April when the long rains ends. At Point B i.e. by July, appropriate action is taken to handle the problem. By the beginning of October when it's just about the peak of the dry season, a solution has been employed and the relations are brought to normalcy. Point D shows the problem is recognized but it is too late to design a solution strategy.

Are there any local level institutions that influence water management in the Usangu Plains?

Customary arrangements; Most customs, taboos, beliefs and practices have died off with modernity, religion and increasing mixing up of people due to immigration. In the upper catchment, traditional 'rain makers' (*mwangovhe*) are still believed to cause or chase away rainfall. Traditional chiefs (*mwene*) among the *safwa* ethnic group are influential in conserving riparian trees and water

sources. *Mwenes* would fine or warn anybody who cuts a riparian tree or natural forests known as '*iganjo*'. In some villages *mwenes* are more influential than the Village Executive Officers (VEOs). In such cases there are some power conflicts between the two. There is also a contradiction in the environment sub committee of the Finance, Economic and Planning Committee of the villages where the VEOs are the secretary and *mwenes* are the chairmen. VEOs are reduced to obeying orders as directed by *mwenes* while at the same time VEOs are the overseer of all other committees.

Each village has a village government, with a council of 25 representatives elected from the village assembly. Each village has three statutory committees: Finance, economic and planning; Social services and self-reliance and Law and order committee. The village governments play important role in water management. The Land Act (1999) and the Village Act (1999) gives the village council a full mandate to manage its own forests and natural resources, water inclusive. The Finance, economic and planning committee has three subcommittees relevant to water management; irrigation, domestic water and environment subcommittees. Irrigation sub committee is further divided into smaller canal committees. The canal committees oversee water allocation in the tertiary canals through water rotations. The committees also mobilize irrigators for cleaning canals and implement by-laws; especially fines accrued from the breach of the by-laws. Domestic water subcommittee is active only in the villages where there are tap water and boreholes. In most villages in the upper catchment the subcommittee has never been formed and in those villages that the pipe water system collapsed the subcommittee has become redundant. There is no specific institution that regulate water abstraction for brick-laying, although the practices uses water in September, October and November where brick-layers divert river water to the laying sites and a lot is wasted through percolation and evaporation. In all villages studied i.e. Igurusi, Majenje, Mswiswi, Nsonyanga, Inyala, Itewe, Idunda, Iyaway, Ikhoho and Izumbwe-Usafwa, water is not returned to the river after abstraction for brick laying. If all abstractions for brick laying were spared, villagers downstream in Ukwaheri might access some domestic water and save time and energy they use as they walk an average of 20 Km per trip fetching for water.

At the ward level, councilors may arbitrate in water conflicts may mobilize community to contribute for construction of irrigation schemes or may go upstream to negotiate for water (c.f. present councilor in Ruiwa ward.) there are also primary courts and ward tribunals in every ward that hear water conflicts, although people resort to both as the last alternative.

At the district level, the District Water Engineer (DWE) is charged with formation and overseeing registration of the domestic water user entities. S/he has nothing to do with water resources. Each district town is also supposed to form water board. 37 towns have formed these boards in Tanzania including all towns in the Usangu plains Mufindi, Mafinga, Makambako, Chunya and Makete. Rujewa-Mbarali, although is the home of the most part of the plains has not formed

What about the Basin level institutions?

The Rufiji Basin Water Board (RBWB), established in 1994, meets twice per annum to advise the Rufiji Basin Water Office (RBWO). The main role of the RBWO is to monitor water levels and to grant water rights, a function also performed by the Principal Water Officer at the national level, which is a duplication of efforts. The RBWO has recently established an office at Rujewa in Mbarali district. The office is staffed by two staff; hydromet technician and hydro-geologist who effect monitoring of river water levels, collection of water user fees and arbitrating in conflicts that arise from water use. RBWO has been active in monitoring river flows. Sensitization of local communities toward formation of WUAs has also been done, especially in the Kimani and Mkoji sub catchment. The progress however, is still minimal.

The River Basin Management and Smallholder Irrigation Improvement Project (RBMSIIP) is a World Bank funded project that brings together the Ministry of Water and Livestock Development and the Ministry of Agriculture and Food Security. RBMSIIP was set forth to improve stakeholder participation and voice in the allocation of management of water, strengthening the administrative power of the Basin Water Board, including conflict resolution mechanisms and strengthening the concept of water rights. RBM has constructed several intakes in the Usangu plains that are applauded by irrigators and is likely to construct more. If Mlowo river for example, already have 19 intakes with water rights, and is characterized by several conflicts what if RBMSIIP build some 5 or 10 more? Why not invest in the community capacity to share water within the available intakes?

Are there any other stakeholders in Usangu Plains?

Yes. Worldwide Fund for Nature Conservation (WWF) has proposed some interventions for catchment management activities in the Kimani sub catchment. Tanzania National Parks Authority (TANAPA) through the Ruaha National Park and Tanzania National Electricity Supply Company (TANESCO) are among the key beneficiaries of the water downstream. However, both TANAPA and TANESCO has no direct intervention on water management but are actively represented in the River Basin Water Board. TANESCO pays honorarium for using water to the RBWO.