

Centre for

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**TOWARDS REFORMING**

**THE INSTITUTIONAL AND LEGAL BASIS OF**

**THE WATER SECTOR IN ZIMBABWE :**

***Current Weaknesses, Recent  
Initiatives and Their Operational Problems***

Edited By

Calvin Nhira<sup>1</sup>

with Bill Derman<sup>2</sup>

*August 1997*

University of Zimbabwe

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- A Member of IUCN - The World Conservation Union

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# OPERATIONAL PROBLEMS IN ORGANISING

## CATCHMENT AUTHORITIES

Alex Bolding

### Introduction

The paper discusses a number of key issues in the implementation of (sub)-catchment water user organisations, based on experiences in Nyanyadzi river catchment, Chimanimani district. In Nyanyadzi catchment many indigenous farmer initiated irrigation furrows can be found, some with and some without legal water rights. During times of water scarcity (like in drought years in the late eighties and early nineties) a struggle ensued between downstream irrigators in the government-run Nyanyadzi irrigation scheme and the various groups of upstream irrigators in Shinja resettlement scheme and Mutambara and Muusha communal areas (see Bolding *et al.*, 1996). From 1983 onwards Nyanyadzi irrigation scheme plot holders, in conjunction with Agritex have organised upstream raids along Nyanyadzi river to destroy 'informal' irrigation furrows and thus bring the water to their intake. The setting up of a stakeholder platform to regulate water distribution could be very opportune. However, a number of conceptual, legal and practical problems relegate the idea of a water user platform to the category 'easier said, than done.'

### Boundaries

Hydrological units do not reflect social units. So far very little debate has been devoted to the exact criteria involved in setting the boundaries for catchments and sub-catchments. It has been assumed that technocrats can set such boundaries from their offices in Harare, based on maps of watersheds, righted water users, and hydrological zones. However, Zimbabwe basically harbours only 3 distinct catchments (Zambezi, Save and Limpopo) and these are difficult to organise communication-wise considering their large scale.

So the question of sub-division arises. And with it the question of criteria for sub-division: number of inhabitants/water users; administrative units; available flow; distinct features in the landscape; social communities?

In Nyanyadzi catchment large differences in awareness and acknowledged hydraulic interdependence exist amongst the different water users. In the remote Ruwedza valley inhabitants do not consider downstream water users, since the valley is so distinctly sealed off by an impassable gorge. Water users in village 12 of Shinja resettlement scheme are quite aware of Nyanyadzi irrigation scheme due to the destructive raids on their furrows. Water users on tributary rivers to the Nyanyadzi do not normally consider Nyanyadzi irrigation plot-holders, but are aware of any upstream users. And finally, Nyanyadzi irrigation scheme plot holders are aware of upstream users since the start of upstream raids in 1983, but they do not consider downstream users along Save river, since their scheme seems a natural end node of the funnel-shaped Nyanyadzi

catchment. Another complicating factor is that Nyanyadzi scheme gets its water from two different sources ( Nyanyadzi and Odzi river).

### **Entitlements to Water**

The perception of entitlements to water by actual users on the ground is not very much informed by legal entitlements as stipulated in the Water Act. Basically most Nyanyadzi catchment irrigators will agree that water does belong to God, or in other words is a public good, which has to be shared with others. Most people do not readily agree that Government owns the water. Practically entitlement to river water is confined to those who own or use land along the river, which is very much in line with a riparian conception of water rights.

However, formal irrigators like the ones in Nyanyadzi project claim the water from Nyanyadzi river belongs to their scheme. They have the entitlement to all water. Upstream furrow irrigators tend to claim the same in case they have a water right and use any measurement infrastructure in their furrows to further their claim. Still these don't deny others 'a chance'. One can never divert the whole available flow in the river.

Within Ruwedza valley further entitlements are ascribed to the type of land holding. Most downstream furrow irrigators will agree that the white and black commercial farmers upstream have a right to abstract water since they own title deeds to the land. During the fierce water scarcities of 1992-95, the headman at the downstream end of Ruwedza valley also rallied for water, claiming that his furrow was the oldest in the area. Upstream furrow irrigators generally seem to claim entitlement on the basis of their top position. In most cases people living downstream are ignored in the matter of entitlements, besides being able to benefit from the fact that one is never entitled to divert the whole river flow. This issue also ties in with local conceptions of boundaries.

Some successful furrow irrigators also claim that they use the water to more benefit to the nation than the wasteful Nyanyadzi plot-holders whose main canal is suffering from heavy seepage losses (up to 70%). And some furrow irrigators that made heavy investments in canal infrastructure also use this investment for denying Nyanyadzi plot holders water: the government has provided the latter with canals and in that sense Nyanyadzi plot-holders are less worthy of the water.

Springs are generally considered private property of the person who works on the surrounding land. Striking consensus exists among communal and resettlement farmers that those misha<sup>14</sup> that have no direct access to land near the river, should be excluded from any consideration of water entitlements besides the use of domestic water. However, in most cases unoccupied river banks are the exception to this rule.

<sup>14</sup> Denotes homesteads or clusters of homesteads

These local perceptions of entitlements should be inculcated into the modus operandi of any future catchment user organisation, since an a priori assumption that government owns the water does not cut much wood on the ground.

### Historically Grown Local Arrangements

In some instances water users have devised their own arrangements to deal with distributional matters. These arrangements are born out of historical necessity to settle conflicts or out of mutual dependencies.

In Ruwedza valley downstream furrow users share the available water during water scarcities by means of a weekly rota of turns. However, this rota does not include upstream commercial and resettlement farmers. The downstream furrow users would never challenge the (white) commercial farmer's right to water despite the fact that the latter has no water right and the people living downstream have. This is to do with the fact that the commercial farmer assists in road maintenance (to enable trucks to come and collect produce from the irrigation furrows) and has assisted the downstream water users in their plea not to be included in the resettlement scheme, but maintain some form of autonomy. van der Zaag and Roling (1996) report on a similar type of relationship between downstream communal farmers in Nyachowa and an upstream white commercial farmer. These relationships are multifarious, and mutually beneficial in different respects. By highlighting one aspect of such a relationship or arrangement and proposing to interfere with it, one can put the other aspects of the relationship in jeopardy.

The existence of water sharing arrangements and encompassing other relationships between different groups in a catchment, asks for a very careful appreciation in future water user organisations. The trade-off in water sharing that was negotiated by the DA in 1987 and 1991 between village 12 furrow irrigators and Nyanyadzi plot-holders is another example of such an arrangement that could be instituted in other parts of the catchment.

### Various Water Uses and Users

Farmer-initiated furrows are used for many purposes: irrigated crop production, drinking water for people and cattle, gardening, filling of dip tanks, water for washing clothes and cutlery, etc. The present concept of 'beneficial use' as defined in the Act is strikingly narrow minded, when confronted with these various beneficial water uses.

With the different uses come different users. Gardening and the use of spring water is almost the exclusive domain of women. Most commercial crop production in furrow irrigation is somehow seen as being part of the male domain. Discussion on water distribution and allocation are mostly initiated and led by men. Still, a catchment board that involves only male-dominated channels of communication and decision-making is not very likely to make a big impact.

## **Representation and Leadership**

Zimbabwe hosts a big variety of social institutions, each of which yield their own, sometimes overlapping, allegiances. Many proposals that originate from policy makers' desks in Harare seem to pay lip-service to the kaleidoscope of allegiances in present day Zimbabwe.

Village 12 in Shinja resettlement provides a case in hand: who should represent village 12 on the catchment authority? The traditional leaders, that are recognized by the new comers ('squatters'), but despised by some official settlers? The VIDCO members, who seem to represent mainly the official settlers? Or the ZFU representative who also runs a small informal furrow, but has hardly any following in the village? Or can we resort to the formal 'in-charge': the resettlement officer, who hardly visits the village?

The point is that representation and leadership issues require careful recognition for each locality and do not lend themselves to simplified (or reified cultural) models of how people should be represented.

## **The Interplay Between Ground and Surface Water**

Most surface water originates from sub-soil sources (springs, aquifers). This implies that any regulations with regard to river water abstraction of necessity have to include considerations of ground water use.

In places like Ruwedza valley the intricate interplay between ground and surface water is fully appreciated by its water users. Furrows abstracting from the river are spread geographically to optimize benefits from recharge of the river by sub-soil aquifers (see also van der Zaag, 1996). Springs are carefully exploited and riverine vegetation is promoted, especially in the upper reaches of the Ruwedza river. Thus sponges in the riverbed are allowed to continue to exist. Whenever a spring surfaces relatively far from the riverbed, the water may be used by the land user to his/her own benefit. Thus the scope of water users is expanded. This has implications for the membership of future Catchment Authorities. In Ruwedza valley it would be rather naive to exclusively include furrow irrigators in any catchment authority.

## **Not Everybody Stands to Gain**

The main stumbling block in setting up a catchment authority in Nyanyadzi has been that hardly anybody was interested in joining such an organisation. During times of water scarcity, like in 1995, downstream users are readily interested in striking some kind of deal with upstream users for the duration of the scarcity. However, the eternal problem of the equation is the fact the top-enders stand to gain nothing from such arrangements.

This has serious implications for the setting up of successful catchment authorities. Somehow top enders must be provided with incentives to comply. Subsidies for good husbandry practices (perhaps extended to sustainable forms

of stream bank cultivation) provide one option. But again this is likely to produce only marginal effects. More substantial benefits in the shape of infrastructural improvements (dams) are more likely to make an impact. On the other hand suitable penalties imposed by recognized representatives could be used. However, for those to be effectively imposed and administered, first the catchment authority must be allowed to grow. As stated above hydrological units do not coincide with social units. And thus it is more likely to succeed in becoming a recognized social entity, if the authority is not merely about punishment from the outset. First, win-win options should be exploited.

This is why in Nyanyadzi a start was made by providing two experiment centres in the field of water and soil conservation in the upper parts of the catchment. The 'kukuraya' approach of taking up farmers' suggestions, which are put to test in the local trial centres, promises almost immediate gains for local upstream farmers (in terms of increased yields) as well as long terms benefits for downstream water users (by reducing sedimentation and increasing base flow). The basic challenge in the institution of catchment authorities lies in the identification and exploitation of such win-win options.





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