

# The Practice of Smallholder Irrigation

Case Studies from Zimbabwe

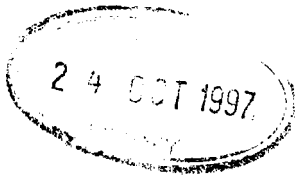


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# 5

## Whose water?

### Interlocking relations and struggles over water in Nyamaropa irrigation scheme

*Dumisani Magadlela<sup>1</sup>*

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This chapter offers a critical look at different farmer perceptions of water in Nyamaropa irrigation and dryland farming areas, and centres on the parts played, and strategies employed by different parties and leaders in negotiating for control over water resources. The main focus here is not how water must formally be managed by either Agritex or the Department of Water Development in Nyamaropa irrigation scheme and its surroundings, but how farmers as irrigation plottolders and dryland farmers facing droughts and famine, deal with issues pertaining to water availability, distribution and use in their social environments.

The first section of the chapter looks at the background issues of the area, touching on its history, location, and some social and political characteristics. There is a discussion of the different roles and influences of local traditional leadership such as Headman Sanyamaropa, the area's traditional rainmaker, Sabadza, of religious beliefs, and of government extension service staff, which helps sharpen the analysis. Seasonal variations and their different water flows are also looked at. The second section examines relations between the Irrigation Management Committee (IMC) and Agritex and the present situation as partly shaped by the past. Next, there is a section comparing the two winter seasons of 1994 and 1995 and how farmers dealt with the water shortage problem. A fourth section looks at three case studies of water struggles among farmers in everyday life in the irrigation scheme; at farmers 'stealing' water, fighting over water, and some distribution and use(r) wrangles. The cases involve government through Agritex, and farmers' organisations of the Irrigation Management Committee (IMC) and block committees. The final section offers a discussion of issues raised in the main body of the chapter and an attempt at some conclusions.

Nyamaropa irrigation scheme is located in an area with an average annual rainfall of 800 mm.<sup>2</sup> Part of the catchment area of the Morozi river that supplies the project

with water is on the border with areas that receive annual rainfall of more than 1,000 mm, which makes it slightly different from the rest of the schemes in Manicaland, most schemes are in areas that receive average annual rainfall of less than 500 mm and have poor soils. The area's average annual rainfall of 800 mm has dropped drastically during recent drought spells (Table 5.1). The irrigation scheme's water comes from a concrete weir at the perennial Morozi river, 10 km away. There is no pumping, the system is fully gravity fed. There is a control dam 7 km away with a capacity of 1,625,000 cubic metres and a night storage dam in the scheme with a capacity of 30,000 cubic metres (Agritex records, Nyamaropa). Nyamaropa scheme is divided into four blocks (A-D). The divisions were a result of their different development stages during construction. Each block has its own canals that supply it with water either from the main canal or from the night storage dam. Each block has an average of 150 plottolders, and one extension worker is responsible (Figure 5.1).

**Table 5.1: Seasonal rainfall figures, Nyamaropa area (1988–1995)<sup>3</sup>**

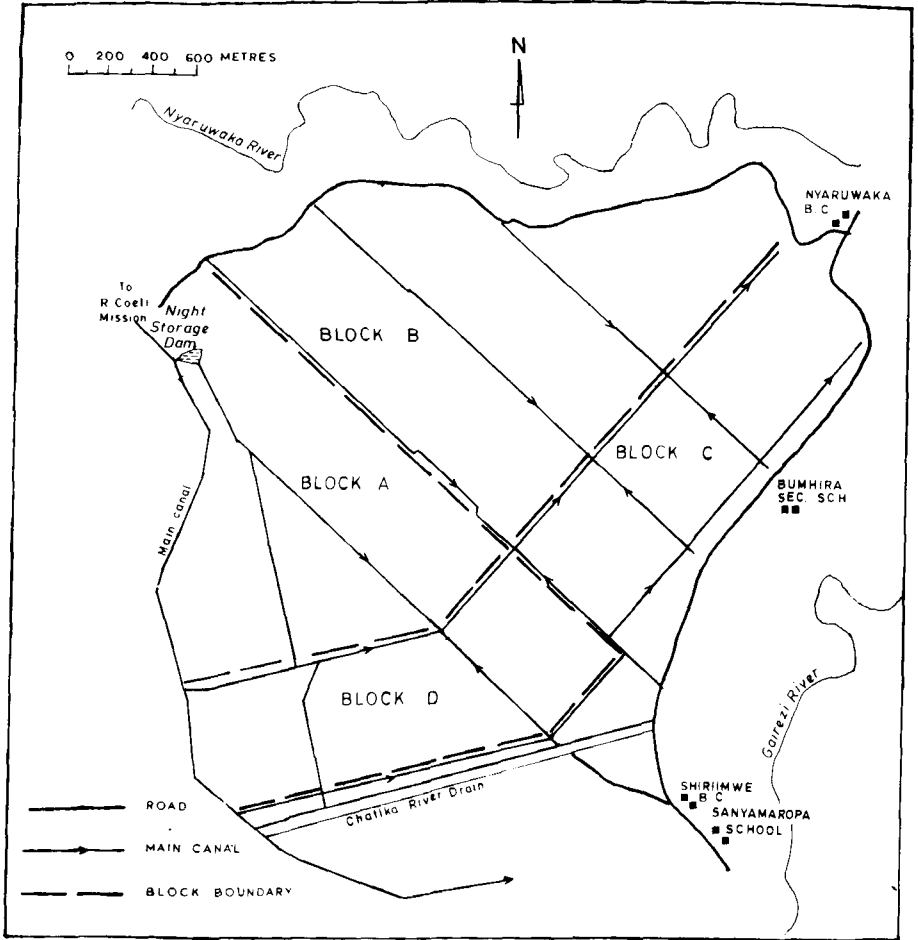
Season	Rainfall (mm)
1988–89	869
1989–90	1 147
1990–91	492
1991–92	229
1992–93	1 046
1993–94	562
1994–95	710
Average	722

**Source:** Agritex and Meteorological office records, Nyamaropa irrigation scheme.

## NYAMAROPA IRRIGATION HISTORY

### **The colonial period**

Official reasons for constructing Nyamaropa included the fact that it was meant to resettle African villagers who have been forcefully removed from areas designated as commercial land and bought by European farmers (Agritex records, Nyamaropa irrigation scheme). The other argument was that the government wanted to develop the area so that remote areas could produce food for themselves and provide employment, in other words, so that it could help develop the rural area. Farmers in Nyamaropa too say that Nyamaropa was constructed by government so that people who were displaced from prime commercial agricultural land (Natural Region I), in



**Figure 5.1: Nyamaropa irrigation scheme and its blocks**

much cooler and higher places like Juliasdale and Nyanga, as a result of the Land Apportionment Act (1931), would have somewhere to settle. The other reason was to stem the migration tide into urban areas caused by land shortage and taxation. In a way, the project worked as a form of resettlement for landless Africans. Reynolds (1969), an economist who lived in and studied Nyamaropa irrigation scheme in 1966, says that it served as a settlement scheme to give displaced people a second chance in life, and stabilise this portion of communal settlements. Page and Page argue that this could also have been part of the larger strategy by the European settler community to establish and sustain a lasting White hegemony in all sectors of the Southern

Rhodesian economy by pushing Africans into poor areas (see Page and Page, 1991).

It was an African demonstrator, Mr. Mukonyora, who first identified the area's irrigation potential in 1954 and lobbied his bosses to take up the suggestion. Construction of the scheme started in 1956, with forced and voluntary labour, and was completed in 1960, with the first crop harvested the following year. Some farmers say that there were demonstration plots as early as 1959, but this could not be ascertained for want of specific records.

The majority of irrigation settlers were of the Manyika ethnic group, and came from Mutasa, Mutare, Katerere, Juliasdale, Bende, Manica Bridge, Matema and Nyanga areas within the Province of Manicaland. Locals who were reluctant to join were of the Barwe-Tonga group, said by local headman Sanyamaropa and 'his' village heads to have originally come from across the Gairezi river and the hills in Mozambique. Some settlers who arrived before construction of the irrigation scheme thought that Europeans were following them to disturb their lives again as they did by moving them initially, probably to move them once more to a poorer place when they had confirmed that land in Nyamaropa was agriculturally productive. Locals resisted the idea of having to pay to farm under irrigation. This was coupled with intimidation from black nationalist leaders who visited the area in the early sixties and discouraged farmers from being part of the project. For example, a letter written by the native commissioner for Nyanga, to the provincial native commissioner for Manicaland in Mutare on 24 July 1962, had the following evidence:

the main canal was completed in 1961, but by that time political agitators had been at work, and by *playing on the ignorance and natural fears and suspicions of conservative, backward people towards anything new they managed to arouse considerable opposition towards irrigation* (Agritex records 1962, my emphasis).

This could be one of the reasons why the local people initially refused to join the irrigation scheme.

Farmers interviewed during collection of historical data indicated that irrigation authorities were harsh with farmers who did not stick to rules. Their crops were ploughed back, especially when they did not plant on the set dates or did not weed their plots, and they could do nothing because farmer organisation was weak. There were no strong leaders to take the initiative to resist what they regarded as harassment, probably because of the common fear of land development officers.

### **The post-independence period**

After 1980, there was a change towards a populist stance in government that saw farmers claiming the right to do what they wanted with their plots, saying they had fought for them during the war. This populist<sup>4</sup> stance of irrigation management

unfortunately partially incapacitated Agritex in as far as acting decisively on, for example, farmers not following cropping programmes and defaulting on maintenance fee payments. In meetings, farmers often reminded each other that they fought in the war to get land, and they should not let anyone harass them. But Agritex maintain that since they are in a government-managed project, farmers must adhere to irrigation rules, “which are there to protect the powerless”.<sup>5</sup>

## THE CURRENT SITUATION

Nyamaropa irrigation scheme in 1995 accommodated more than 400 irrigators,<sup>6</sup> with roughly one-third of them of local Barwe origin and two-thirds of them *wauya* (newcomers) mainly of the Manyika tribe. Agritex employees working and staying in the irrigation scheme comprise an agricultural extension officer, an agricultural extension supervisor, 3 male and a female agricultural extension workers, 1 clerk, and an office orderly. There are 5 water controllers/bailiffs, one for each of the four irrigation blocks and their foreman. There are 25 general hands tasked with the duty of maintaining irrigation infrastructure.

Some of the emergent characteristics of the project’s development are that locals<sup>7</sup> who stayed out of the scheme now want to join, and those who joined later (especially after 1980, mostly locals) and got smaller plots, want a new system of irrigating that will give them access to more land. There are two main sources of conflict among farmers and between farmers and Agritex, from where other management problems emerge: first, and Agritex says they are the main problem, are the power struggles among farmers *per se*, which have an ethnic dimension, and with which Agritex cannot help but get entangled; second, water shortage as a result of recurrent droughts and alleged ‘illegal’ abstraction of irrigation water by villagers in the catchment area has been a sore point for several years now.

### **Of tribes, tradition and farming**

The main differences among farmers are based on origin, and not only on ethnic and religious grounds. Most irrigators belong to the Manyika ethnic group and are ‘newcomers’ or settlers to the area, said by Agritex to be more progressive than the group of locals belonging to the Barwe group. The former are members of churches and do not (openly) worship their ancestors, they use modern farming technology such as applying fertilisers, using rotation and hybrid seed, they own modern farming equipment, and during normal seasons grow more cash crops such as cotton, tobacco and beans than food crops such as maize. Local irrigators worship their ancestral spirits (some of them openly), most of them have kinship ties with local dryland farmers, and believe that newcomers pose a major threat to their well-being by not attending ceremonies to ask for rain from the spirits of the land. They say that newcomers took most of their land when they were settled in the scheme and



consequently their own children have no land to cultivate any more. There have been clashes over the fact that irrigators do not observe the traditional resting day (*chisi*),<sup>8</sup> which falls on a Friday in Nyamaropa, claiming that they are in business and cannot afford to take 'holidays'.

### Organisational squabbles

Farmer organisations in Nyamaropa started in the 1960s with the formation of a farmers' co-operative society which purchased inputs and sold farmers' produce. It collapsed during the height of the war in the 1970s. By 1995, the time of the study, there was an Irrigation Management Committee (IMC) which was supposed to be elected annually in July from among the farmers themselves, comprising seven members led by a chairman. The formation of the IMC was an idea of government, and organised through Agritex. The first Irrigation Management Committee set up in Nyamaropa was formed in 1981. It was supposed to work with Agritex and represent farmers' interests to the managing agency,<sup>9</sup> that is, Agritex. Some irrigators have accused the IMC of neglecting its role as a farmers' body, and Agritex staff have sometimes complained of members of the Committee dictating to them what should be done and trying to take over the management of the irrigation scheme. At one stage, in 1994, the chairman of the Committee, Mpesa, is said by Agritex to have wanted water controllers to report to him at his homestead and not to Agritex.<sup>10</sup>

Perhaps as a response to this situation, Agritex and some local irrigators formed block committees in 1995 as parallel bodies representing farmers in the irrigation scheme. Their argument was that the IMC was making it difficult for them to manage the irrigation scheme in a progressive manner. The IMC, with support from most senior newcomer irrigators, said that Agritex wanted to control everything farmers did in the scheme, and accused the department of using divide-and-rule tactics to regain full control by forming what they saw as a parallel body to the IMC. They said that block committees were not only puppets of Agritex, but also *mafoshoro* (shovels) used by Agritex staff to clean up what the latter would not like to handle themselves. One newcomer, Nyamangodo, said, "*madhumeni ari kusaidzira ngetumacommittee twavo utu...*" (extension workers are using their little committees to frighten people).<sup>11</sup>

Block committees were often referred to by Agritex and their unofficial leader Samunda and his supporters, as Area Committees (ACs), so that Mpesa and his followers who did not want to hear of the 'block system'<sup>12</sup> would not be too alarmed. There seemed to be a semantic game being played by Agritex and block committees on the minds of irrigators. They believed that if they left out the word 'block', they could win the hearts of some of Mpesa's supporters through their activities, which called for more transparency and accountability in the functions of management committees, something farmers had not seen in the main irrigation management

committee. The situation of who had more support then was not very clear, both sides were claiming that they had the majority of the farmers behind them, but each side was not courageous enough to call a meeting where there could be an open challenge of the other’s legitimacy.

There were repeated clashes among irrigators concerning who had to distribute water, who had to collect and keep fines paid by those who breached by-laws, and generally concerning who was representing farmers’ interests. Both committees tried to direct the course of events in the project towards their own goals. Some newcomer farmers accused Agritex of stirring up tribal hatred by helping form block committees with mainly a local, indigenous Barwe constituency. They were not only a minority in the irrigation scheme but had smaller plots compared to newcomer irrigators. The result was a persistent wave of clashes with Agritex staff who said they “strove to be fair to all groups of farmers”.<sup>13</sup> This has led to a situation where farmers do not adhere to Agritex recommendations on, for example, cropping programmes and acreage to use per crop per season, especially during water shortages. Farmers generally do not observe by-laws,<sup>14</sup> which they formulated themselves together with Agritex.

**Of dry seasons and production levels**

There was a noticeable drop in production from 1994–1995. Both seasons<sup>15</sup> experienced different rainfall levels, but the crucial thing for farmers was the amount of water available for crop production. Water flow figures from the main weir supplying Nyamaropa indicated a drop from the 1994 to the 1995 season. There was a need to manage available water more efficiently, and the subsequent requirement by farmers to limit cropped area for winter seasons gave rise to the argument that strict control and regulation of farming practices by farmers themselves through their own elected representatives could yield positive results. Tables 5.2 and 5.3 show, in their respective ways, water flows into the irrigation scheme for the 1994 and 1995 winter seasons, irrigated area and estimated yields (Agritex estimates) for the same seasons.

**Table 5.2: Nyamaropa water flows, 1990–1995 winter seasons<sup>16</sup>**

Season	1990	1991	1992	1993	1994	1995
flow (l/s)	409	219	120	411	223	193
Percentage of design flow <sup>a</sup>	58	31	17	58	31	27

<sup>a</sup>Design flow for the scheme is 710 lps.

**Source:** Agritex records, Nyamaropa irrigation scheme.

**Table 5.3: Irrigated area and estimated yields, winter 1994 and 1995**

Season (winter)	Crop	Area (ha)	Yield estimate (tonnes per ha)
1994	wheat	130	3.5
	beans	158	2.4
1995	wheat	113	4.5
	beans	50	2.5

**Source:** Agritex records, Nyamaropa irrigation scheme.

The 1994 winter season had better rainfall than 1995, which was very low, though it did not match the worst drought of the 1992 season where irrigation water flow dropped to an all-time low of 120 litres per second, with a percentage flow of only 17 per cent. Water distribution problems mount during dry seasons, and management strategies by both farmers and Agritex change from laxity towards more strict control. Table 5.3 shows estimates of irrigated area and yields for the two seasons.

Irrigated area for both wheat and beans was higher in 1994 than in 1995. This was the season in which there was a free-for-all in cultivation and water use. Yields for the same season show a different picture, however, with estimated yields for 1995 above those of the previous season. In 1995, Agritex and some farmers decided that stricter control of resources or irrigation practices by farmers' block committees would solve the problem of 100 per cent<sup>17</sup> cropping, which not only disrupted but also delayed irrigation turns, resulting in poor crops with lower yields than the season where there was more control from amongst farmers themselves.

Having given a brief sketch of the background to the scheme, the following section looks in greater detail at the 1994 and 1995 dry winter seasons in Nyamaropa and discusses how the various actors involved dealt with water shortage. The two seasons' activities are treated as cases in themselves, and are followed by three case analyses of farmers dealing with water-related problems in the 1995 winter season.

## WHOSE WATER IS IT?

The question of whose water is it in Nyamaropa cannot be satisfactorily answered by referring to the Water Act (1976) or to the water rights that give irrigation farmers preferential use. Some farmers upstream of the Nyamaropa scheme strongly believe that they are entitled to use the water of Morozi river on their lands. But Nyamaropa irrigators believe that farmers in the catchment area are using water that they are not legally entitled to, and they say that such practices should be stopped before the irrigation scheme runs dry.<sup>18</sup>

### **A catchment view**

Farmers in the catchment area, who have what irrigators normally refer to as 'gardens', but are in fact community irrigation schemes, say that no one can make them stop using free-flowing water, no one owns it except God and the spirits.

No one *owns* water here, no one, why do they want to upset the spirits?  
We are not using anyone's water, this is a gift to everyone on the land from ancestral spirits and God.<sup>19</sup>

They have resisted attempts to have rules and regulations of water use, and at one meeting with Agritex staff and farmers' representatives from Nyamaropa irrigation scheme in 1992, a spirit, who spoke through one of the *svikiros*<sup>20</sup> (spirit mediums), urged them to share the little water that was there and stop fighting over it, and warned them against lining canals with concrete because, said the spirit, "I do not like concrete on my land".<sup>21</sup> Although they respect and fear the spirits, irrigators joke about them and say that the very people being protected by the spirits live in brick houses perched on concrete slabs. However, villagers in the catchment area believe that water is a community resource, collectively owned by the people and in the custody of elders and spirits of the land. This means that when irrigation farmers ask them to stop using it they have to address their complaints to the spiritual realm too.

There seems to be conflict between the traditional good of collective ownership and modern legal rights and entitlement enacted in the Water Act (1976). The problem gets worse during periods of water shortage, and has encouraged irrigators to seek funding to source water from the perennial Gairezi river nearby. But this water is already set to be used in the recently commissioned Japanese-sponsored 600 ha Nyakomba irrigation scheme, 2 km north and downstream of Nyamaropa.

### **Traditional leaders and dryland farmers in Nyamaropa**

Headman Sanyamaropa says that all farmers should share the water since they live in the area and are watched over by the same spirits. The headman tries cases of wrong-doers (including irrigators) from his area at his homestead. He says that he plays a unifying role and expects all people to respect traditional rites. He believes that if all people in his area observe *chisi* (resting day) and follow customs of the land as inherited from the past, rains may start falling just as they did in "the good old days". However, the headman's views on water and rain have sometimes precipitated clashes between his people and local churches. In August 1994, he summoned all church leaders in his area to a meeting where he castigated them for disrupting the spiritual harmony of the area by praying in sacred places and forcing spirits to move away, making them 'homeless', which makes them lose the power to provide rains for the people. This was especially directed at members of the Apostolic Church, who pray on sacred hills and under sacred trees (see Magadlela, 1994).

The headman's colleague on the 'water front', rainmaker Sabadza, says that there are evil winds that stop rains from falling just before the rainy season starts. He sometimes goes across to the hills in Mozambique to perform special rituals to 'close' down the bad winds so that it may rain again, but this is not complemented by people's general behaviour, where they now wear red clothing and carry umbrellas<sup>22</sup> during the rain season and do not observe *chisi*. Chief Sawunyama, headman Sanyamaropa and rainmaker Sabadza argue that today rainmaking ceremonies are conducted by people who are not qualified to perform the rituals. They used to be a sacred preserve of elderly members of the community. Old women who had reached menopause would prepare specially brewed beer from finger millet, and appoint elderly men who would talk to the spirits amid offerings of tobacco snuff and the special beer to the spirits; normally they would be drenched wet by heavy rains by the time they reached their homes from the ceremony.<sup>23</sup> Alas, not today.

During dry seasons there is normally an influx of dryland farmers who come into the irrigation scheme to fulfil their 'draft power and labour for irrigated land' deals with their irrigation counterparts. This worsens the water situation in the scheme, and contributes to the problem of 100 per cent cropping. Dryland farmers say that they have the right to come in and irrigate because the project is on their land, from which they were forcefully removed. There is now a planned extension of the irrigation scheme with a further 70 ha coming under irrigation. This has not been received well by some irrigators who argue that the extension should have waited for the boosting of present water supplies and not the other way round, because this will only compound the problem and result in escalating in-fighting for water.

However, there are mixed feelings among drylanders: some of them are very enthusiastic about the new development. One drylander, Masunungure, the secretary to Headman Sanyamaropa, put across his view: "I am looking forward to the canals coming to our fields. finally we will be able to produce enough to feed our families and sell some, and we will stop renting". But some of them expressed fears that they may not cope with the labour demands of full-time irrigation, which should give some of the senior members of their community more than a mere *deja vu* feeling about the early days of the irrigation scheme.

### **Agritex's view**

Agritex staff take a more general and scientific point of view. They say that the drought is a nationwide problem caused by environmental factors and is not limited to Nyamaropa alone. It has regional proportions which mock the *chisi* argument, but they always urge farmers to stick to the rules of the land as prescribed by elders. They believe that water is indeed in short supply, but argue that it can be put to better use if farmers understood how it should be used and stop wasting it by '100 hundred per cent cropping'. Some irrigators say that all they have to do is pray for the rains and things will be alright. But still dam levels drop every season and there is a

permanent threat to their production. At the end of the day what matters to the different parties is whether there is enough water to maintain farmers' livelihoods. Some of the advice that Agritex staff have been giving to farmers is that they should share what little water there is, but when it comes to illegal water abstraction in the catchment area, some of them argue that farmers there should regulate and limit their use of water, but must also apply for water rights. Agritex staff are afraid that if they allow any forms of extension intervention in the catchment gardens, such as assisting with fencing, more interventions would come which would result in these farmers being forced to line their canals and pay irrigation fees.

However, Agritex's views differ on specific issues and there is no consensus on what should be the case with irrigation water use. Within the irrigation scheme, the department has been trying to instil a sense of farmer responsibility when it comes to water management, more so because staff sometimes get entangled in farmer squabbles over water use. Water controllers, locally known as *nyamivura* ('the one who deals with water'), work closely with Agritex and farmers to distribute water within the four blocks. All four of them agree that they have the toughest and most risky job in the scheme. They cite cases where they have been threatened with violence.

## THE STRUGGLE FOR CONTROL

An important part of this section is to highlight the differing perceptions of water and its crucial significance in shaping social relations. One of the central issues that comes out of the debate in the following section is: How do different farmers in specific situations perceive the water resource, and how does this influence how they relate to other actors who relate to the same source(s) of water in different ways?

### **The Irrigation Management Committee and Agritex: winter 1994<sup>24</sup>**

There are clearly different stakeholders in Nyamaropa irrigation scheme whose practices and interaction reveal interlocking webs of relationships, rivalry and scheming collaboration. Winter is normally the driest part of the year in Nyamaropa. This is the period with the stiffest challenge to Agritex and farmers in water management within the irrigation scheme, and witnesses an increase in water-related conflicts.

The IMC has a chairman, a vice-chairman, a secretary, a vice-secretary, a treasurer and seven committee members representing irrigators from the scheme. The committee consists largely of newcomers from the Manyika ethnic group. Agritex staff say that Mpesa, the chairman of the IMC, is too political to lead farmers in a government scheme. They have repeatedly cited the example of a case that took place in 1992, after the severe drought season of 1991/1992. Farmers went to Agritex

and even took their case to the district administrator's office. Farmers who had not paid their fees were denied water. The IMC chairman reported Agritex to the area's Member of Parliament (MP) for denying water to farmers with maintenance fee arrears dating back to seasons beyond 1991. The MP came and publicly denounced Agritex's actions, threatening the Agritex officer with 'serious punishment'. That event could have marked the turn of Agritex staff against the IMC, and the shift in their support towards a group of farmers (mostly locals) who supported Agritex's campaign for the block system,<sup>25</sup> with fascinating outcomes for both farmers and Agritex.

The official role of the IMC is not clearly laid out to farmers, and it tends to take on some of Agritex's functions. The draft Irrigation Policy and Strategy drawn up by the then Ministry of Lands, Agriculture and Water Development and the Food and Agriculture Organisation (FAO) in December 1994 proclaims that,

Irrigation Management Committees have no management function such as decision making and planning of development nor do they have a function in resource mobilisation. Their major functions are centred on communication and co-ordination of activities within the irrigation scheme. (Zimbabwe, 1994: 11)

This may be the official view but it certainly does not reflect what is happening in some irrigation schemes. The IMC in Nyamaropa is expected to play a key role in joint management<sup>26</sup> of the scheme with Agritex. The department's staff say that they provide the technical bit in the running of the project, but prefer to delegate some of the management functions to the committee(s) in the hope that they will one day run the scheme on their own (see Rukuni, 1995b).

The 1994 winter was dry, and there was a shortage of water in the scheme. Agritex staff recommended to farmers that they limit the season's acreage in order for them to see their crops through to maturing stage, but this was not done formally through an announcement in a general meeting. When irrigation turns became unbearably longer (more than a month in some cases), farmers pushed for and held a meeting with Agritex. They accused both Agritex and the IMC of not communicating with them about the critical water problem they were facing. They alleged that formerly meetings would be held to tell farmers how many acres each farmer was to use for either wheat or beans in winter, but this particular season there had been nothing of the sort.

During the meeting, while discussing the causes of their plight, one woman said,

the problem is with the people who irrigate their gardens up-stream . . .  
let us organise a group of our people to go and talk to those people in  
Morozi who are stealing our water and tell them to stop . . .

The response to that, even before she finished, was a roaring "No!", and someone in the crowd said, ". . . *zvinhu zvechivanhu zvinonetsa*" (African things/magic are

troublesome), adding that, “you do not want to get yourself mixed up in all that right now”. The discussion came to a head when one elderly newcomer irrigator (Mautsa, 68 years old), stood up and directly addressed the chairman of the Management Committee who was chairing the meeting, and said,

... you are being used [by Agritex] repeatedly and you know it, you seem to enjoy it, your whole committee is being used by Agritex to cover up for their lack of commitment, on their faults (to outbursts of laughter) ... you are like a dog which runs after a rabbit and sweats for its owner but gets only the dry bones at the end of the day. Let us do what we want, let us irrigate everywhere, as much as we want to ...”

Then another irrigation farmer, a younger man of about 30 years, apparently challenged by the previous statement, stood up and said,

What are we here for? Are we not the farmers here? And do we not depend on the land and the water for our food? The problem is not with Agritex or the Management Committee, it is with us farmers, the people who are irrigating ... we must know what we want first.

There were mixed reactions to the idea of letting water run freely and everyone irrigating as much as they wanted, with some thinking that they are just going to suffer at the end of the day if they did not listen to Agritex who were more knowledgeable on the different issues pertaining to irrigation farming and water management. Mrs Mapfurira, wife of one of the earliest irrigators in Nyamaropa, and one of the most vocal female irrigators (at least in public meetings), said that the problem was with the lack of communication between different parties involved in the management of the irrigation scheme. She asked,

... why was there no agreement between Agritex and the Management Committee on what acreage to grow winter wheat? What used to happen in other seasons? What has happened to that system of doing things?

There was no direct response to her question, but one member of the audience (a newcomer irrigator) said that there is a major problem which everyone seems to be conveniently avoiding, that of the invasion of the irrigation scheme by dryland farmers to grow wheat because they had a bad season with their summer maize and other food crops. He pointed out that there is no system of regulating the acreage, especially when people have their own contracts with dryland farmers in which they promise each other pieces of irrigated land in winter. No one can reverse it when the winter season comes and they realise that they have little water. He recommended that “someone, somewhere” should create a system of controlling this. He added that some irrigators have relatives out there, and that some of them were protected



by these relatives during the war when irrigators were accused of being sell-outs to colonial authorities for joining the scheme, and they feel they have an obligation to help their dryland relatives and friends.

At the end of the meeting there was no final or binding agreement on what acreage to grow winter crops, and it was obviously too late to change, because farmers had already planted in most of their plots, including crops for their dryland counterparts. That season saw poor wheat and beans yields, blamed by Agritex on lack of sufficient water and poor fertiliser application. The following winter season (1995) saw a change in the way farmers and Agritex dealt with the water shortage problem.

### **Block Committees and Agritex: winter 1995**

The talk of introducing a block system type of irrigation had been going on for a couple of years within Agritex. Nyamaropa farmers had even been taken by bus to Masvingo to see Mushandike irrigation scheme which has the block system. Farmers saw it, appreciated the 'neatness' of the system, but said that it was suitable only for farmers who used it as family gardens, who had large dryland plots as their main fields, and not full-time irrigators like themselves in Nyamaropa. When the extension officer temporarily introduced the system in the harsh winter of the 1992 drought, farmers marvelled at how much could be harvested from a small piece of land when treated and watered sufficiently. But when the IMC chairman then, Samunda, a local irrigator, recommended that farmers take it up permanently, the current chairman, Mpesa, and most of the newcomers, called a meeting and voted him out of office. Samunda has campaigned for the block system with the assistance of Agritex since then, and this has culminated in the formation of block committees.

Samunda is a committee member in both the current IMC led by Mpesa, and in his block's Area Committee, which he formed and which was emulated by disgruntled farmers in other blocks. He has always had the support of Agritex in pursuing his block system objectives. Agritex say that he is 'approachable' and more democratic in his work than Mpesa who has been accused of being dictatorial and impossible (Magadlela, 1995: 10).

The functions of block committees are similar to those of the IMC, and the latter have accused Agritex of undermining their operations. Initially, block committees gained a lot of influence and support from what appeared to be a majority of irrigators, especially for their strict adherence to their non-formalised and unwritten rules. They insisted that everyone must stick to the agreed one-acre plot for the 1995 winter season in order for the little remaining water to go round. Together with Agritex, they also put in place a system of irrigating sub-block by sub-block, which most farmers say has significantly quickened irrigation turns. Through block committees, some irrigators, mostly locals, have been calling for rules to prohibit sub-leasing, renting and borrowing of plots in the scheme, which they say disrupts irrigation turns, affecting their levels of production.

However, these 'achievements' have been short-lived. After the dry winter season's crops were harvested, farmers started complaining about the over-diligence of block committees who were 'arresting' and fining farmers for breaking rules. Some of them were even accusing Agritex of taking advantage of block committees to introduce *their* block system.

A comparison of the two seasons reveals that 1994 was more of a free for all situation than 1995, which saw farmers taking the initiative to regulate themselves and each other in order to try and get more out of the little remaining water in the dams. While there are obviously other reasons leading to the formation of block committees in 1995, it should be noted that the need to have stricter control had been necessitated by the previous year's experience of loose controls which led to almost a 100 per cent cropping of the whole scheme, which in turn resulted in longer irrigation turns and the final result of poor yields. Apparently, there were better harvests in 1995, which had stricter control by farmers themselves.

In 1995, the IMC was temporarily threatened with collapse, and Agritex staff were pleased with the prospect, saying that there was no law that could stop them from dissolving Mpesa's management committee, because the committee's idea was born out of Agritex's need to have more communication between staff and farmers in the first place. In a meeting between Agritex and the block committees, about 2 months after their formation, the irrigation supervisor and Samunda said that the chairmen of block committees and their deputies would now form a new management committee from among the chairmen of block committees, which would perform all tasks currently being carried out by the present IMC. It was a simple change in names, but what they were doing was actually forming a new IMC. However, when I mentioned this to Agritex staff, their comment was:

to understand this better, take it from Members of Parliament's point of view. An MP is elected by people in his constituency to stand for the people. The same thing happens with the Management Committee, it should be formed from [among] Block Committee members to avoid clashes, and because what will be 'chased' at area level will also be 'chased' at top level.<sup>27</sup>

Agritex are expected to be impartial in deliberating on farmers' issues, but in this case they said that they were trying to restore order and an atmosphere conducive to collaborative work and joint management of the irrigation scheme by farmers and themselves. They can disband any committee if they want to, but they say that they are human beings too and have friends among irrigators. They need to maintain good relations with at least a majority of farmers, hence their stand in support of Samunda, because they would like to believe that he now has the majority of irrigators behind him, or behind block committees.

Agritex staff, however, say that they are able to work with any farmer who wants their assistance. For example, in the winter of 1995, they chose Mpesa as the farmer

on whose plot they put an experimental wheat crop. This was against the wishes of the area committee for block B, who were insisting that they would not accept the crop because it was already 5 days after the block's planting deadline for wheat (15 May), and was going to disrupt their water movement or irrigation scheduling. Agritex insisted that the trial should go ahead, saying that they got the seed from higher offices late, and *had* to plant it this season. They managed to get their way.

Mpesa has a faithful following among most elderly farmers and some newcomers, who feel that he has the political stamina to defend their interests, just in case Agritex and the block committees should decide to impose the block system. Agritex and the new block committees see him as a bother sometimes, but some irrigators who are suspicious of Agritex's support for block committees regard him as a necessary check on Agritex's power in the scheme. Other farmers have lost faith in him because they say his whole irrigation plot is always green and his crops never suffer because he uses his influence to get water whenever he wants to irrigate.

The following case studies of specific events attempt to show how (in)effective block committees were in dealing with 'deviant' farmers among irrigators during the winter of 1995.

## INDIVIDUAL FARMER ENCOUNTERS WITH CHANGE

The three cases presented below show clashes of different actors over water in the irrigation scheme, mostly between or among farmers, sometimes involving Agritex. They raise the question posed by the title, whose water is it, and who has the right, or the power (or both) to decide who is to use (or not use) water when, or how much and for what? An important issue illustrated by the cases concerns wrangles between different groups of actors and how conflicting parties strive to control water distribution or to have a say in it. The three cases are drawn from the winter of 1995, to help analyse changes that took place then and farmers' responses to critical water shortage.

### **Sakubende's case**

One senior local irrigator in Block B (Sakubende) grew an acre of irish potatoes in his son's 2-acre plot in the winter of 1995. The son, Richard, is not yet married. They live and work together, but have plots registered in their respective names in order to use more land in times of restricted acreage. The father says that the idea is to teach the son how to manage his own affairs later, when he stands on his own. Unfortunately, the son's plot has a steep slope and water contact with the soil is poor, resulting in the need for the farmer to change the direction of the border strips. One day the father was irrigating the son's 1.5 acres of potatoes, using 10 siphons. The extension worker passing by and saw him doing that. He knew the problem with the plot, and advised the farmer to reduce the number of siphons so that there would be a slower flow with more contact and better infiltration.

The farmer went on irrigating in his own way, and his turn passed before he was satisfied with the level of 'wetness'. He was supposed to wait for the next irrigation turn which would have taken about two weeks to come, but he just waited until other farmers in the sub-block had finished and then took water again to irrigate. The water controller saw this and arrested him. Sakubende told him that he had been given permission by the extension worker who knew the problem with the field. The water controller took the matter up with the extension worker who summoned the farmer to his office. When he got to the office, the farmer denied that he had earlier said that the extension worker had given him permission, saying that he only needed water badly and the extension worker knew his problem field. The extension worker wanted the case to be taken up to the AC so that the farmer could answer charges of stealing water, since his actions prejudiced other farmers in the next sub-block in terms of time and amount of flow. But nothing was done.

### **Moses' case**

Moses had one acre of wheat and four border strips with beans and vegetables. His wife took more water than had been allocated to her by the AC. Each farmer was supposed to irrigate only one acre with wheat or beans, or with both during the winter season, but she went on to irrigate more than that. To make matters worse, she irrigated an acre of a field with *tsaru* (crop waste) against which block committees and Agritex had strongly warned farmers. Nyabasa, a *sabhuku* (village head) and a member of the powerful AC for Block B, was waiting for his turn to irrigate, and knew approximately how long it would take for someone to irrigate one acre with a particular number of siphons. After a while he checked and saw that she was still irrigating. He went over and found that she was almost through irrigating an extra piece of land (one acre) beyond the AC's agreed one acre. He picked up the siphons without a word and went over to his plot to irrigate his wheat. The next thing Moses' wife knew was being summoned to the AC to answer charges of stealing water. Then Moses himself became directly involved in the case. Some AC members said they knew that he had always been a trouble-maker as far as water issues were concerned, and promised to deal with *him*<sup>28</sup> severely. In the 'trial' *he* was found guilty of stealing water to irrigate crop waste and was charged Z\$20 per border strip. She had irrigated 5 strips, so it added up to Z\$100. He had to pay up or be denied water by the AC working in conjunction with the extension worker and the water controller in his block.

He appealed to Agritex to intervene, alleging victimisation and hatred from some AC members, but Agritex said that the case had to go through the top committee<sup>29</sup> first. Whether Moses talked to the IMC chairman, Mpesa, about the case or not is not clear, but he refused to pay the fine until the case was heard in front of 'a neutral' body. Days went by and the next irrigation turn came. He devised an underhand strategy to get water: he wrote a letter to the water controller and said that it came

from the agricultural extension supervisor, giving him permission to irrigate while his case was being reviewed. The water controller allowed him to irrigate. When the AC members heard of this they were furious. They went to Agritex to complain, thinking that Agritex staff were sabotaging their efforts to manage their blocks efficiently. They were told that the supervisor knew nothing about the letter. The irrigation supervisor himself was now in the forefront looking for Moses. He sent for him at his work place at the local Cotton Company of Zimbabwe depot, but he did not turn up.

In a general meeting chaired by Mpesa to discuss a project to extract water from the Gairezi river, to be sponsored by Biomass Users' Network (BUN), a non-government organisation working in conjunction with the Rockefeller Foundation, Mpesa and Moses were seen by some AC members chatting behind a building, and they thought that they were trying to find a way to get Moses off the hook. When the AC finally caught up with him, he admitted having made a mistake, and was fined the previously imposed \$100 plus another \$100 for stealing water for the second time, and charged an extra \$70 for initially denying the case and then implicating a government official in his theft. The outcome of the case was regarded as the first sign of authority and effectiveness by the block committees, even though it was only the AC for Block B involved, and it certainly gave them the confidence and show of support (from Agritex) that they so badly needed: the block committees' coup over the IMC had seemingly begun.

### **Nyakuchena's case**

Block D was the first to set up an AC in Nyamaropa irrigation scheme, under the guidance of Samunda. Most irrigators in this block are locals, their average plot size is 3 acres. Most of them feel that they need to have access to more land and thus tend to support the block system with the belief that they will then get an acre in each block and gain in both different soil types and larger plots. They say that the AC system helps them gain more control over what goes on in their block, and they can ensure that they do not have water wastage and can quicken irrigation turns in their block, which does not have the advantage of a night storage dam. Since the formation of the AC they say that they have quickened the irrigation turns and made farmers more aware of the need to observe rules and to stick to regulations such as adhering to the number of acres agreed to in the block general meeting.

Their strength was put to the test in the winter of 1995 when they realised that one farmer's 4-acre plot, Nyakuchena's, was split into two between himself and his wife and registered as such with Agritex. Mai (Mrs) Nyakuchena said that she had to do that because the family always got very little return from the plot's produce after marketing. She alleged that her husband took all the money and squandered it on beer, and she wanted to educate her children. She had explained her case to Agritex and they had assisted her. She told me that she was going to fight the whole

establishment for her right to benefit from being an irrigator, and said that Agritex had been understanding and helpful, but AC members were jealous of her effort since they were all men.

So he had his 2 acres and she had hers, but they still lived together and 'ate from the same pot', used the same labour and equipment, yet disposed of the output separately. This was the argument that was used by the AC when it told them to use one acre since they constituted one household, and the committee wanted to ensure that all farmers got a fair share of the little water available. Mai Nyakuchena argued that she was a plotholder in her own right and was entitled to make her own decisions regarding *her* plot. The AC refused to buy this argument, but lost the vote in a general meeting which deliberated the case. However, they insisted that they would approach Agritex and have the case resolved once and for all, and promised to repossess all plots with absentee landpersons in the block since some of those who rented them did not care how they used irrigation water and the infrastructure. The major role of the AC is to regulate the whole system and stick to the rules, especially during water shortages.<sup>30</sup> If there was anything amiss in her actions, Mai Nyakuchena apparently got away with it.

## DISCUSSION AND CONCLUSIONS

Water is a finite resource whose conservation and careful utilisation has been the *leitmotif* of Agritex and farmers' leaders in meetings in Nyamaropa irrigation scheme. The main water source, the Morozi river catchment, has been the subject of debate among irrigators, and between irrigators and villagers in the catchment area. These discussions centred around one crucial question: whose water is it? And who should get priority use? All sides believe that water comes from some higher power somewhere, and that they have to ask these 'powers that be' for water when it is short. The legal and spiritual domains of entitlement are invoked to either claim or protect rights to priority usage. The central issue of discussion is how water shapes relations, or relations shape themselves around water. Irrigators' belief that they have a bigger claim to the Morozi river water pushes them to challenge catchment villagers' right to use the water, but they are afraid to set up a platform where they can openly discuss the issue. Catchment farmers' mainstay is the much-feared spiritual realm that they appeal to. This seems to be a successful strategy that they have so far employed to stave off the irrigators' challenge for the right to use water. They have, by way of making irrigators afraid of accosting them on the issue, created space for themselves to continue to use water freely. Irrigators rely on the legal framework based on the water right that the irrigation scheme was given during its early days. They seem not to have any more obvious route to take in tackling catchment farmers on water use. But their options are not exhausted; they have started a project with an NGO to pump water from Gairezi river into the scheme.

In the irrigation scheme, newcomer irrigators who have dominated farmer organisation from the start seemed to be losing the driving seat to local irrigators soon after the formation of 4-acre plots by those who preferred to move away from a *laissez faire* type of management towards a stricter control of farmers' irrigation practices. Strict control means that dryland farmers may find themselves pushed out of their irrigation deals with some of the irrigators. Some of the elderly irrigators, widows, widowers and single mothers with irrigation plots, who rely on dryland labour and draft power, may be forced to seek commercialised services such as tractors for tillage from Christian Care, a charity organisation, and from the District Development Fund (DDF), who provide such services among smallholder farmers. This may worsen the already strained relations between irrigators and drylanders, although their divisions are not clear cut. Local irrigators sympathise with their dryland colleagues and would like them to come into the irrigation scheme, and this may be the main reason why they support the implementation of the block system which may open up more plots for outsiders. Block D has the majority of local irrigators and is the pioneer of block irrigation. Newcomer irrigators do not want to change the status quo. They want to maintain it so that they can keep their larger plots, and keep their stranglehold on the IMC. Some of them blame both nearby drylanders and catchment villagers for water shortages. Their main worry is the availability of water, which is always uncertain. This is compounded by divisions on the issue of drylanders renting in to grow food crops especially in winter. Some of them depend on these deals to produce anything at all!

In the irrigation scheme the complexity of the situation is intensified by the way farmers' relations interlock when it comes to giving support either to Agritex or one of the committees. Drylanders place the blame for water shortage squarely on the shoulders of irrigators and their worshipping practices of the Christian church, but irrigators will not actively participate in what they regard as heathen rituals even if these are meant for their benefit too. They only donate cash towards rain-making ceremonies. Both sides know that they have no power over water, and appeal to a higher authority to supply it. They blame those who do not participate in their rituals if there are no substantial results from their ceremonies.

Farmers' committees in the irrigation scheme represent different group interests. There has been a (temporary?) shift in power and support from the IMC, which mostly comprises newcomer irrigators, to the new ACs which are led by local irrigators. Agritex is in the centre of it, and is getting caught up in farmer politics, the more so because the department's support is crucial for the influence either committee can have on farmers' irrigation affairs.

There is a conflict of roles caused by an unclear definition of the functions of both Agritex staff and the IMC. To some elderly farmers, Agritex's role and purpose in the scheme is not clearly laid out. Some are saying that the four ACs and the IMC are doing all the work for Agritex, and that the latter should pack their belongings and leave farmers to run the project. But the IMC's and ACs' actual functions remain

blurred, if not purely conjectural. There are by-laws which were drawn up jointly by Agritex and the IMC in 1989, but they are rarely invoked when farmers break rules. Agritex say that they are supporting the ACs because they are a step towards the department's objectives of one day handing over the irrigation scheme to farmers to run on their own, with Agritex staff only playing an administrative and advisory role, and not that of managers. Today, the irrigation scheme is characterised by a *laissez faire* type of management and there is certainly a penchant for nonchalance in the way the project is managed.

The three cases described reveal different perceptions of water as a collectively owned and group-managed resource. When water is short there is always the pressing need to conserve the little that is available, and punish anyone who seems to disregard the common agreement of limited use. Irrigation farmers agree that stealing water is a common practice in Nyamaropa during all seasons, but quickly add that this should not be done when either the committee or Agritex rules that farmers should use water sparingly for the next crop, or at least they should do it without getting caught. The two seasons described above present contrasting views of how farmers relate to each other and their situation under changing forms of farmer representation and water availability. The temporary acceptance of AC control in their respective blocks in 1995 reflects the urgent need among farmers to regulate their own activities, or put checks on each other's irrigation practices. The way this is done offers some important lessons for the move at policy levels from farmer-participation *per se* towards farmer-management of smallholder irrigation schemes (Rukuni, 1995a and b).

The IMC meeting held in 1994 (above) revealed that at the end of the day the problem was lack of co-ordination between the official managing agency and farmers, including farmers' representatives. It also raised the important point of the purpose of irrigation and how farmers themselves see their role in it. Another revelation, probably with more serious implications for future management of agency-run schemes, was the way farmers' discussions revolved around the following issues: regulating water use; the role of Agritex and the committees; acreage per farmer per (winter) season; and finding a solution to the problem of water shortage. Farmers are aware of the role and implications of their actions on their overall production levels, and they try to shape each other's perceptions of the problems they are likely to face if they take one or the other of the suggested solutions.

In summary, the paper set out to discuss the issue of the importance of water in shaping relations between Nyamaropa's local and newcomer irrigators, between irrigators and dryland farmers, and between irrigators and other farmers in the catchment area. It was shown that water is a crucial resource to all farmers in their respective areas. When water is abundant, Morozi river (catchment) illegal irrigators cease to be a headache for irrigators, but when it is short, they are the culprits to be disciplined, together with the drylanders who maintain irrigation deals with some of



the irrigators. Among the irrigators themselves there are more restrictive measures that are taken to regulate water use, and this leads to the creation of conflicting groups.

The analysis brought out the fact that social interaction and deals of mutual assistance between different actors or groups of actors is always there with or without the shortage of water. The interfacing of the different actors on water issues has latent forms of conflict which often assume frictional proportions and sometimes explode into open accusations during shortages when one or either party goes witch-hunting for the wrong-doer.

On the whole, there are differing perceptions of whose water it is, who makes rain fall, who is entitled to which water and why. The headman, the rainmaker, irrigators, Agritex and dryland farmers all believe in one of the two sides of water source and entitlement. The underlying factor is that all farmers want water to secure or maintain their livelihoods, and Agritex is keen to ensure that those farmers who they believe are entitled to water have access to it. In this context, how farmers relate to each other is, to a large extent, influenced by how they relate to the most crucial resource in their lives: water.

## NOTES

1. I would like to thank Professor Michael Bourdillon of the University of Zimbabwe and Professor Norman Long of Wageningen Agricultural University for reading and commenting on an earlier draft of this chapter.
2. Agritex records, Nyamaropa irrigation scheme.
3. The seven seasons were arrived at for the simple reason of wanting to pick an equal number of seasons on either side of the poorest rain season in the history of the irrigation scheme (1991/92).
4. Cheater (1992) says that the early years soon after 1980 were characterised by a 'temporary flirtation' with socialism. This was the period of the extended independence honeymoon symbolised by excessive government spending on social services. There was an unannounced relaxation of rules and regulations in government irrigation schemes which apparently gave farmers room for some kind of *de facto* control.
5. Extension Officer Sikume, Nyamaropa irrigation scheme, pers. comm.
6. It is difficult to have an exact figure because farmers continue to subdivide their plots and allocate them to their children or relatives whose names they then register with Agritex.
7. These are people who inhabited the area before the irrigation scheme's construction and who joined it when it started operating, some of them joined much later after independence in 1980. Here I use part of the categorisation noted by Reynolds (1969) which still applies after 35 years.
8. *Chisi* refers to the traditional resting day which has historical origins in the phases of the moon. When the moon is full (*tendere*) people rest for 2 days and do not scratch the earth. When the moon 'dies' (*mafi*) people also rest for 2 days, and when it is new in the

west, with only a slice of it seen (*njedzana*), they stay another 2 days. The headman and his followers believe that failure to observe these sacred days (common among irrigators who say that they are Christians and do not worship the moon) is the main cause for poor rainfall and droughts (Headman Sanyamaropa, 18 March 1996, pers. comm.). At present, *chisi* is observed for only 1 day per week in Nyamaropa.

9. Pazvakavambwa (1984b: 421) gives a discussion of issues pertaining to committees in irrigation schemes.
10. This could be a result of lack of co-ordination between the two sides, and such expressions may have been attempts to prejudice an openly confrontational and aggressive farmers' leader. His response to my inquiries on the issue was, "Well, I don't know what they think, but...who is supposed to irrigate?"
11. Field notes, September 1995.
12. Agritex staff in Nyamaropa said that this is a system whereby each farmer will have one acre of each crop in each of the four blocks per season. The advantage of this they said was in that it would make disease and pest control easier and water movement would be easy to monitor.
13. Agricultural extension officer, Nyamaropa irrigation scheme, pers. comm.
14. By-laws are a product of joint negotiation between Agritex and the Management Committee, approved by a general meeting of irrigation plottolders. They specifically lay down rules and regulations (together with punishment) governing each irrigator's tenancy conditions, but are not taken seriously by most irrigators. Farmers breach them literally everyday, but they are rarely invoked to make farmers accountable for their actions. Block Committees have no written by-laws, but rely on verbal declarations in meetings of what has to be done, how and by whom. They display half-hearted support for the main Committee and its by-laws.
15. Here the focus is on winter seasons which are generally dry periods of the year in Nyamaropa.
16. The winter season is normally put at between the months of May and September. Flow data given in the table are averages (and average percentages) of the 5 winter months for each year.
17. Agritex staff say that 100 per cent cropping is a situation whereby every farmer uses every piece of his/her irrigation plot regardless of the water situation in the dam.
18. For example, Nyanyadzi, Chibuwe, Mutema, Tawona and Nyachowa smallholder irrigation schemes dried up in the dry winter season of 1995.
19. 'Illegal' irrigator, Morozzi catchment area, May 1995.
20. A *svikiro* is a spirit medium, a respected person chosen by spirits of the dead through whom they can communicate with the living and give them advice and guidance.
21. Extension Worker Sithole, Nyamaropa irrigation scheme, pers. comm.
22. Red clothing and umbrellas are considered taboo during *maenza* (rain season), they are believed to stop rains from falling.
23. Rainmaker Sabadza, pers. comm.
24. See Table 5.3 for more detail.
25. For a detailed discussion of block irrigation see Manzungu in this volume.
26. At least in the narrow sense of deciding how to distribute water and how much acreage

per crop per season should be the rule, especially in winter.

27. Agritex Extension Officer Sikume's comments on an earlier draft of this paper.
28. Almost everyone who talks about this case refers to the person who committed the crime as the husband and not the wife who actually irrigated. It seems that the acknowledged head of the household has to deal with the case when it assumes what one may call 'public proportions'. This is a reflection of the dominance of patriarchal ideology in the area, which is reflected in the tenure system where the man's name is registered and everything else follows.
29. This was during the (transitional) early days of the AC, and the IMC still had some significant credibility and respect among farmers, and this may have been a temporary situation. It should be noted, however, that this paper was written during fieldwork, and a lot of changes may already have taken place by the time this book is published.
30. During normal seasons no one among irrigation farmers seems to worry about how the other is using water, except for those who are affected by delays in irrigation turns.



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