

The Illusion of Community Ownership: Community-based Water Management in Uchira, Kilimanjaro Region

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Abstract

Community/stakeholder participation, ownership and cost sharing/recovery are key components of Tanzania's water policy. However, these are not easy to achieve, and their benefits (both in terms of efficiency and equity) may be overstated. Evidence from this research suggests that some of the basic assumptions of Integrated Water Resources Management (IWRM) require revisiting. The limitations of 'bottom-up' and demand-led approaches need to be recognised. It is likely that the state cannot simply be a facilitator and still expect to achieve basic human rights such as equitable and universal access to safe water. It may need to play a more active role in setting and enforcing equity criteria and even in delivering schemes itself. Research from Kilimanjaro Region (Pangani River Basin) funded by the German Agency for Technical Cooperation (GTZ) on rehabilitation of a piped water supply demonstrates that:

- *Community-based management (through water users' associations) does not necessarily lead to broad community ownership.*
- *Benefits from local-level management are not shared equitably and many people remain water-poor despite significant increases in water supply.*
- *The project mechanism is unsustainable and expensive and communities are being asked to bear the cost of expensive and institutionally inappropriate schemes.*

Key words: Participation, Ownership, Governance, Institutions, Rural water supply

Introduction

The evolution of water policy in Tanzania follows a similar pattern to the evolution of the state itself. In the early post-colonial era, it was characterised by infrastructure provision by the state. It has subsequently become an accepted wisdom that the state could not efficiently provide basic services. Therefore, in order to provide such services and thereby to reduce poverty, the state should act as facilitator to the efforts of private companies, civil society organisations and local communities. It is further assumed that the greater the ownership by local communities of service provision, the more sustainable that service will be.

This paper explores this evolution in water policy and examines some of its core assumptions through an intensive case study of a water users' association in the Kilimanjaro Region of Tanzania. Evidence from this research suggests that water users' associations do not necessarily promote broad community ownership and that the burdens of ownership (cost-sharing and communal labour) are disproportionately borne by the poorest groups. This necessarily raises questions concerning water pricing and human rights to minimum basic needs.

The research also raises more substantial and pressing questions about the scale and scope of water management (in this case rural drinking water supply). This paper explores what lessons small-scale donor projects such as this can offer to agencies working on water policy.

Evolving water policy in Tanzania

The evolution of water policy in Tanzania is necessarily mirrored in the evolution of the Tanzanian state. Policy in the water sector reflects changing political ideology, as can also be seen in the evolution of agricultural policy in Tanzania (Ponte, 1999). The broad thrust of this change is explored in Table 1.

Table 1: Evolution of water policy in Tanzania

Period	Water Policy
Colonial Period (1890s-1961)	Reliance on improvement of indigenous systems Some large-scale irrigation projects (Hyden 1980)
<i>Ujamaa</i> (1961-1980s)	Water as a public good State takes responsibility for capital investment Access to water improved from 12-47% (Hyden 1980; Kapile 2003)
Transition (1990s)	State continues as provider in partnership with donors, particularly GTZ, KfW and Danida 1990/01 Access to protected water source: 46% (Hyden, 1980; Maganga <i>et al.</i> , 2002; URT, 2002; Kapile, 2003)
Liberalisation	State as facilitator and regulator. Civil societies and communities to deliver services in partnership with private sector Integrated water management approach echoes international 'consensus' 2000/01 Access to protected water source: 55% (URT, 2002; Sokile <i>et al.</i> , 2003; URT, 2004)

Following the Arusha Declaration in 1967, there was heavy investment in water schemes during the 1960/70s with the result that the proportion of the population with access to improved water supply rose from 12 to 47% in the period from 1971-80. Water was recognised as a public good and the government undertook to cover all capital costs of investment (Maganga *et al.*, 2002; Vavrus, 2003) However, these early investments could not be maintained and many schemes fell into disrepair.

Since the 1990s, Tanzania has attempted to implement an integrated approach to the management of water resources (Sokile *et al.*, 2003; 2004). The 1991 policy aimed for the provision of safe, clean water to all the population within 400 metres by the year 2002. However, by 2002 only 50% of the rural population had this access. The 2002 water policy (URT, 2002) sought to rectify gaps in the 1991 National Water Policy, which framed the state as the main investor in, and manager of, water projects. The revised

policy, in common with most policy reform of this period, reoriented the state away from service provision and towards facilitation, co-ordination and formulation of policy.

This document views water as an integrated component of Tanzania 2025 Development Vision which aims to achieve a high quality livelihood for its people, attain good governance through the rule of law and develop a strong and competitive economy. Universal access to safe water is viewed as one of the central features of a quality livelihood.

The 2002 policy argues that the existing water acts (1974 and amendment in 1981) are insufficient to deal with the current management challenges. Water in Tanzania is managed through a river basin approach and is divided into nine hydrological zones, and this policy makes a case for integrated water resources management at basin level. An integrated management approach seeks a participatory, multi-sectoral and multi-disciplinary management that views water as a scarce resource and makes linkages between water, land-use and the importance of water ecosystems in the national economy (URT, 2002a).

In line with international agreements on water resource management - for instance the Dublin statement on water and sustainable development - current policy recognises the importance of a sufficient supply of water and an adequate means of sanitation as basic human needs, as well as institutional mechanisms that operate through community user organisations and the private sector. The measure of this right to water is given as 25 litres of potable domestic water per day at a distance of 400m, serving 250 people per outlet (URT, 2002a). However, this is a target to be aimed at, rather than a recognised legal right, as it is in South Africa (Sokile *et al.*, 2004).

Considerable emphasis is placed by the 2002 document on the participation of water users and local communities in managing water and in driving projects/programmes, on cost-bearing by communities, on working with NGOs, private sector and other external agents, and on decentralisation of decision-making (Sokile, Kashaigili *et al.*, 2003; WaterAid, 2004; Kyessi, 2005). Community ownership is seen as a means of achieving sustainability through community investment and commitment to their schemes, and specifically through the mechanism of village water committees. Communities are expected by the policy to pay a portion of capital costs (in cash and in kind) for rehabilitation and extension of existing schemes. Communities are also expected to pay the full costs of operation and maintenance. Thus water has become reframed as an economic good (URT, 2002a; Vavrus, 2003; Winpenny, 1994; Rogers, de Silva *et al.*, 2002).

Here is the contradiction. Whilst the Tanzanian government recognises water as a basic right, it lays out no specific means of addressing the needs of the poorest and most vulnerable groups. Communities appear to be homogenous and equally able to pay. There is a disconnect in the policy: it seeks to ensure efficient and equitable use of water, but it stops short of suggesting any means of doing so. The policy passes responsibility for water management to independent water user entities and stresses their accountability, but specific mechanisms are undefined. Sokile *et al.*, (2004) maintain that this is a general weakness in integrated water resource management as an approach formulated through the iteration of general principles (such as Rogers and Hall, 2003). These approaches, appropriated entirely by the 2002 Tanzanian water policy, tend to ignore the contextual specificity of management and say little about

issues of equity and sustainability at the micro-level (Cleaver, 2004). They overestimate the capacity and commitment of private sector providers to the delivery of public services (Tendler, 1997; Beall, 2004; Kyessi, 2005). Furthermore, the current programmes and policies of the ministry are themselves ideals and are largely dependent on securing the necessary funds (from donors) to implement them (Kapile, 2003).

Truly integrated water management relies on strategic management of resources at a number of levels. This requires an appropriate institutional framework. At present in Tanzania, water is increasingly being managed through a complex matrix of water user entities (WUE) including private companies, co-operatives, and water users' associations. Legal rights to water can be granted through these organisations. Whilst in the future it is proposed that a rationalised institutional framework be applied relying on water users' associations as the bottom-level in water basin management (URT, 2004), it is necessary to reflect on the limitations of the current mix of government, private enterprise and donor-funded projects.

Community ownership and cost-sharing

The Uchira Water Users Association (UWUA) manages the supply of water in Uchira village in Kilimanjaro, using a rehabilitated pipe system, an office constructed with financing from GTZ, and the labour and contributions of villagers themselves. The association has been operating almost five years but is part of a much longer history of local attempts to secure water for the village. Public and private taps in the village now have water throughout the year, marking a considerable improvement in supply given the previous water shortages in the area (Taylor, 1996). Uchira is a large village in Moshi Rural District, situated approximately 30km from Moshi on the Arusha-DSM highway.

Uchira Village Water Supply Project, as part of the larger Village Water Supply Project operated by GTZ in conjunction with the Ministry of Water and Livestock, is a high-profile project and has attracted considerable attention, having been opened by the President of Tanzania in 2000.

Considerable emphasis is placed by those directly involved in the management of the project on local ownership. Indeed, there is evidence for a certain degree of local ownership, given that the overall strategic management of the project is overseen by a board of representatives elected from members of the association.

Research methodology

This research set out to examine the impact of the scheme in Uchira and to explore further issues of community ownership and participation. Such concepts are often liberally applied but poorly understood in development practice (Cleaver, 1999; Tembo, 2003; Toner, 2003; Chhotray, 2004). Through undertaking an intensive qualitative investigation in collaboration with local people, the research aimed to reveal how the Uchira Waters Users' Association has evolved, and to examine in detail the impact of its policy on different sections of the village population. The examination of this micro-level detail offers some important lessons for the applicability of the general principles of water management alluded to above. This approach also aims to both reveal the formal rules for water management in Uchira and, more importantly, to understand the 'rules-in-practice' (Bingen, 2000; Hilhorst, 2003).

The research team conducted a profiling exercise of village services and community organisations and interviewed in excess of 120 water users. Interviews with key stakeholders and decision-makers in village and ward government were conducted, as well as consultations and discussions with the management of UWUA. Official UWUA documentation (in English and Kiswahili) was also reviewed. Water use from public water points was mapped in detail at 12 public taps in July 2004.

The evolution of UWUA

From its humble origins as a community group lobbying for support for its idea for a water project, UWUA has developed into a professional organisation that manages water supplies in Uchira with an annual turnover of approximately 19million Tsh (equivalent to \$19,000). UWUA was officially registered as an autonomous water user entity under the Water Works Ordinance on 28th August, 2000. It was founded through a legal constitution and backed by local by-laws.

Construction began in 1999 on the rehabilitation of the Ussoro-Kisomachi gravity water supply system (constructed in 1962 by the Tanzanian government) which was supplied by the Mue river and by a new intake at Lyambala spring. GTZ agreed to provide the sum of 42,000,000 Tsh for work which was valued at a total cost of 84,854,590 Tsh. The balance was to be offset through the contribution of labour, materials and funds (via contributions and the sale of water) from villagers.

Once the new intake came into use it became clear that the old system of pipes could not withstand the increased water pressure and that considerable quantities of water were being lost through leakage. From 2001 to 2004, the old pipes were gradually replaced or repaired and the system extended to all areas of the village (except one hamlet). This phase of work was completed in the first half of 2004.

The UWUA constitution sought to establish institutional arrangements for the sustainable management of the water supply, but also to actively seek funds and resources to continue the development of the scheme and to “bring about community and social welfare development in general”.

Criteria for membership of UWUA recognises the contribution of community members to the scheme through either labour or cash donations. To ensure sustainability, broad-based community ownership of the scheme was sought through the creation of a management board comprising representatives from each sub-village (hamlet). A 50:50 gender balance of representatives is formalised in the constitution. Professional staff are also employed (general manager, accountant, two technicians, two office watchmen, one intake watchman and an office secretary). For the first half of last year (2004) UWUA was without a general manager, and the chairman oversaw the day-to-day operation of the scheme. However, to ensure the long-term sustainability and development of the scheme, it was felt necessary to ensure that revenue generated through the supply and sale of water (by self-employed pump attendants) should be sufficient to cover the salaries of a professional management team. Following the departure of the first manager, work is continuing to ensure a separation of professional and management board responsibilities and powers. Again, this process is supported by external facilitation (GTZ).

The development of the organisation has been well supported by regional and district government and GTZ, through training (with Network for Water and Sanitation International (NETWAS) and International Water and Sanitation Centre (IRC) in Nairobi), and study visits to Iringa Region. In addition, a key component of the organisational and institutional development of UWUA has been the support of consultants from CEWS (Community Empowerment for Water and Sanitation), who continue to facilitate the evolution of management and to champion processes for wide and inclusive community participation.

Water use patterns in Uchira

The vast majority of Uchira villagers are using the water from the project to supply their domestic needs. The new system represents a huge improvement; however, most people are still restricted in their water use due to both cost and insufficiency of supply. Many interviewees expressed frustration with having insufficient water for small-scale productive use and many still felt that they could not access sufficient water for livestock.

Using data collected from a survey of public taps during July (and the semi-structured interviewing of Uchira residents), it is possible to estimate that the average household size is 5.45 and average consumption of water per household is 5.1 buckets. This gives an average daily consumption of 18.7 litres per person. Notably, despite the heavy investment in Uchira, the daily consumption remains below the 25 litre policy standard discussed above.

The taps selected were visited at different times of the day to reflect varying usage patterns. At each tap, data was collected relating to the names and ages of those collecting water, the number of buckets collected each day, how far they walked and the amount that they pay. Table 2 gives an overview of the data for each tap.

Table 2: Overview of water service at Public Taps in Uchira, July 2004

Public Tap	No of households collecting in 1 hour	Collection system	Price per 20 l (Tsh)	Distance travelled (m)	Average buckets collected (range)
A	5	Monthly rota	5 to those in rota, 10 to those outside	15-80	4.4 (3-6)
B	6	Private attendant (pay on collection)	10	10-70	7 (5-10)
C	6	Private attendant (collects money later)	10	40-100	5.2 (1-15)
D	16	Rota	5 if in rotation, 10 if not	30-500	4.8 (1-10)
E	13	Rota	5 (credit sometimes given)	30-600	3.84 (2-5)
F	10	Private attendant	10	10-100	7 (2-10)
G	8	Private	10	10-70	4.25(2-10)

		attendant			
H	15	Rota	5	35-800	4.7 (2-12)
I	13	Rota	5	100-2000	4.6 (1-10)
J	13	Attendant (paid 200 per month by each household)	5	30-420	6.2 (3-10)
K	21	Private attendant	10	30-2000	13.5 (6-50)
L	6	Volunteer attendant	5 to those from area, 10 to those from outside	70-1500	2.83 (1-8)

Different areas of the village show differences in patterns of water usage, distance walked to the taps and mechanisms for the collection of money. These differences reflect the characteristics of different areas of the village. For instance, the central areas (*kati juu* and *kati chini*) are densely populated and therefore people do not have to walk far to public taps. The commercial activities in the area could also account for the wider range of water usage in this area. In these areas, people do not need to walk great distances to the public taps (a range of 10-100m, with collection times of 5-15 minutes) and there is a range of use from 2-10 buckets per household. Without exception, a private attendant charging 10Tsh per bucket operated the taps surveyed in the central area. Some attendants were open and willing to discuss business and pricing at the tap whereas others were unwilling to give details.

More rural areas and places with lower population density showed a greater variation in distance walked to public taps and time taken in collection. A considerable number of those questioned during the larger survey of water users argued that they still had to walk great distances to public taps and that more should be built. The distances walked range from 70-2000m, and some of those questioned admitted that they preferred to purchase water at a higher cost from owners of private water lines who lived nearby. It is also noticeable that average water usage is lower in these areas.

The sub-village of Miwaleni is at present excluded from the scheme. It has a completely different geology to other areas of the village and some people are able to draw water from shallow wells within their own compounds. A large spring rises here and is used for irrigated agricultural production. The Red Cross also provided concrete for a water collection area at the spring to alleviate the environmental fouling of the collection area. Those questioned argued strongly that this water was polluted and was the cause of water-borne diseases; consequently they argued for the extension of provision from the Lyambala scheme to Miwaleni. As expected, women and children predominantly do water collection at all taps, with the exception of tap K, to which young men on bicycles were travelling from Mabungo.

There is a noticeable boundary effect due to the presence of the water project in Uchira and the continued water shortages in neighbouring villages. Mabungo suffers from similar water shortages as Uchira used to have, and it was noticeable that people from Mabungo were coming to Uchira to take advantage of the improved water availability. At tap K, the attendant reported that business was very brisk, and she kept long opening hours. The majority of customers travelled by bicycle from Mabungo and collected, on

average, 13.5 buckets of water, with each paying 10Tsh per 20 litre. Children were also found to be walking from Mabungo to public tap I. At most public taps on the village boundaries, water was being sold at the price of 10Tsh per bucket to 'outsiders'. Some villagers suggested that the sale of water to other villages should be encouraged in order to make the project more sustainable. However, others argue that, given the existing shortage in supply, priority should be given to Uchira villagers.

Opinions on water use/management in Uchira

Overwhelmingly, the water situation in Uchira is considered to be better than before. Clean water is now available throughout the year for domestic purposes in all parts of Uchira (except Miwaleni) and people were grateful for the improvement in supply. Interviews with the UWUA and village chairmen also indicate that the improved water supply has made the area more desirable as a place to live. The construction of some 'luxury' housing in Uchira is thought to have resulted from the improved water access.

The development of UWUA is of interest to many external stakeholders, given that this model of water management remains relatively rare in practice. With moves to decentralise the management of water and to pass water rights to companies, trusts and user associations, the experiences of such early pioneers are vital in informing the policy of both regional and central government. Therefore, it is important to consider some of the difficulties and limitations of implementation and sustainability:

Membership

There are around 145 full members of UWUA (UWUA report, 2004), representing a small percentage of water users in the village. To be a full member, certain conditions must be fulfilled, namely that a person makes a financial and work contribution to the establishment of the scheme and then pays a yearly membership fee (1000Tsh in the first year and 200Tsh per year thereafter). The report from the last Annual General Meeting stated that there were 524 people who fulfilled the conditions for membership and numbers have increased from 62 in 2002 to 133 at the end of 2003. Only full members are entitled to vote in UWUA elections and to attend board meetings.

Certainly, the membership fee is a barrier to participation for those with low incomes, but a significant proportion of the wealthier population refuse to become members of the scheme for a variety of reasons: they see members as a closed group treating the scheme as a private company; they perceive barriers to their membership; and they do not agree with the yearly fee when people have already made a financial and labour contribution. There are also those who are uninterested in participation. The survey of water users revealed that the vast majority do not feel themselves to be part of the management of the scheme and are unaware of the income and expenditure of UWUA.

Pricing of water

The survey indicates that a majority consider that the price is too high at the public taps, and is particularly high for the poorest people within the village. Many people recalled that originally the price at the public taps had been 3Tsh per 20 litres, 6Tsh per 20 litres at private taps and 1Tsh per 20 litres for institutions. They considered that the current price of 5Tsh for all discriminates against the poor. Suggestions to resolve this issue include:

- 1) Giving a free allocation of water to the poorest (the elderly, handicapped)
- 2) Charging a monthly fee at public taps rather than paying per bucket
- 3) Reducing the price per bucket to 3Tsh.

Whilst the UWUA constitution makes specific provision for the representation of women, the same is not true of the poorest groups. This research found that in terms of participation, those people who might be categorised as poorer (cultivating a small area, using traditional building materials, eating 1 meal per day) were more likely to be involved in communal labour and less likely to be members of UWUA.

Interviews with management and key stakeholders suggest that the price was increased in order to ensure the sustainability of the scheme. There was also some doubt that people were really unable to afford the price per bucket or the membership fee.

However, interviews with water users, and subsequent investigation into household income and expenditure, suggest that affordability of water is a problem. As many point out, as they rely on farming, their incomes are not guaranteed. In a hard year (such as 2004) when the rains were poor, people expect to harvest very little crop. [Box 1](#) gives details of two families questioned during the investigation. The poorest people already rely on the charity and kindness of neighbours to assist them, or are forced to ask for credit at the public taps.

Box 1: Livelihoods interview - Uchira Village: Fieldwork July/August 2004

Family of 8 – Uchira village

The family depend on farming and they have one and a half acres of maize. Last year they harvested nine bags, which they kept for food. They expect only 1 or 2 bags this year, as the rains were so poor. They do daily labour to cover other expenses. Healthcare is very expensive and the grandmother requires regular medical treatment. There are three children in primary school and they must make some contributions for food. They spend 18000Tsh per year on water and sometimes they do not have enough money and miss food and water.

Family of 4

They farm one acre and if the harvest is good they get 5-6 bags of maize. For other expenses, they do daily labour. They have to minimise all expenses. One child is in primary school but there are many contributions. If they have no money for medicine, then they go to Karamsingii, but if they are referred to hospital they have to go home and take some herbs. They sometimes have to get water on credit at the public tap and often miss meals when there is no daily labour available.

However, it should also be noted that there were a small number from the survey that argued that prices should be maintained or even increased in order to ensure the sustainability of the scheme.

Due to the cost and limitations of supply, many people argue that there is insufficient water for anything other than domestic use and therefore they do not have sufficient water to contribute to productive activities such as vegetable growing and livestock rearing. The management is exploring accessing water rights to additional sources of water, but at the present time the cost of water appears to provide a mechanism to prevent those with private lines from overusing the currently limited supply. Those interviewed who owned private taps mostly indicated that fear of large bills ensured that they were reserved in their usage.

The reality of community ownership

Interviews with staff of UWUA and Leo Balige and records of meetings demonstrate a great degree of commitment to the idea of community ownership in the scheme. The regional water engineer, Mr Shayo, stated that the village had chosen to become a water user's association from a range of options presented. However, interviews with water users and transcripts of local meetings indicate a low level of community ownership (see Box 2). As discussed above, very few people questioned were members of UWUA. Some believe that existing UWUA members have actively raised barriers to wide membership and use the constitution to protect themselves.

Box 2: Extract from notes on South Tella UWUA district meeting 25/2/04

During the meeting there was considerable debate over membership and attendance at communal labour. People said that they were not informed of how decisions were made. Mr Balige asked for calm, saying 'you will be informed because this is your project'. Young man replied: 'No, this is your project!'

Public meetings were held prior to Board elections in the early part of 2004. Records of consultation meetings show a low level of attendance (25 present in Karamsingi 24/2/04; 40 present in South Tella 25/2/04). Interviews further indicate that many villagers are not aware of how the scheme is run and some are not interested or deem that their opinions are not important. Whilst UWUA recognises that there may be some hostile elements in the village, their report makes clear that the organisation should protect itself in order to maintain its sustainability rather than engage with the more hostile opinions.

This may indicate a central communication problem and limited community ownership in practice; a great many interviewees argued that they felt included as a means of providing cheap labour in the construction and operation of the scheme, but not in terms of how decisions are made.

Unfortunately, the series of consultation meetings prior to board election (facilitated by external consultants rather than local staff) may have reinforced the view that the scheme is not owned by the community at large but by a small group who command a great deal of external resources. It adds to the perception of some that too much money is wasted on workshops and buying refreshments for members rather than keeping prices low, or on paying young men to dig trenches rather than forcing villagers to participate in communal labour.

Internal power struggles and communal labour

As UWUA has evolved as an organisation there has been a changing relationship with the village council. Initially the village council and UWUA tried to work in collaboration. Indeed, the chairman of UWUA is a former village chairman. UWUA offices are palatial and well-equipped with modern technology and cannot compare to the village council facilities. The village council now holds their meetings in the UWUA offices, as the former village meeting hall is used for adult education classes.

In the early half of the year there were some tensions and difficulties over the organisation of communal labour. It was agreed that the rehabilitation and extension of the water supply required two days of communal labour per week. This decision was taken by UWUA, to be implemented by the Village Council. The decision caused considerable resentment and tension, as people felt they were already contributing through their payment for water and that in the daily struggle to survive they could not afford to contribute two days of their time.

In some sub-villages, the progress in completing the rehabilitation and extension of public water points was slow. For instance in Karamsingii, an influential local leader passed away and there was no one equally capable of stimulating people in that area to complete the work. The village council were confiscating goods from some of those who did not attend, or arguing that water access should be limited. The village chairman indicated in April that the policy of confiscation was stopped, as they could not sell the confiscated goods and so it was pointless to seize them. However, if people did not comply with orders to attend communal labour, they could be fined or threatened with force and compelled to work by the village militia.

Interviews with water users reveal that the debate over communal labour is a major issue. Many feel that communal labour is for the have-nots, whilst membership is for the wealthier people in the village. Some women argued that they should be exempted as they carry a heavy burden of domestic duties already. The village chairman indicated that there were some exemptions for the elderly, pregnant women and those with infants.

The most recent report from UWUA also suggests some insecurity on the part of the association that there are those who are enemies of the projects, those who seek to steal water or tamper with water meters, but also those who want to undermine the association and replace the current leadership with their own friends and associates. There is a fear that this would undermine the sustainability of the association.

Management of public taps

The official system for collection of revenue from public water taps has elected water attendants charging 5Tsh and claiming 20% of the monthly bill from UWUA. However, as Table 2 shows, this process has been adapted locally. It was found that at taps with private water attendants, the actual price was 10Tsh, as it was claimed that insufficient money could be collected to recompense for the time spent at the tap.

At more remote taps, the system of collection was undertaken as a household rotation and the price was kept down to 5Tsh for those who were part of the rotation. In some respects, it can be argued that local adaptations in the management of taps demonstrates the responsiveness and flexibility of local management procedures. The differences in local management practices reflect differences in the social and economic profile of the locality.

However, the interviews revealed that many people would prefer that the office paid attendants, and they argued that they should operate fixed hours, as opening hours at present were often irregular. Many people also argued that water attendants should be given training in how to serve their customers and also be given bonus payments for good service.

Some taps have more commercial viability than others for attendants. Tap K, which attracts considerable business from Mabungo, generates a significant level of revenue for the attendant, who has responded by opening for longer hours. This is not the case in other village locations. By October 2004, there was even some discussion within UWUA concerning the closure of public taps that could not generate sufficient revenue.

Sales from private taps

Many people supplement their water use by buying from private taps at the standard price of 10Tsh. This is particularly the case in areas where populations are less dense and there is no nearby public tap. Some people sell water as a commercial venture, whereas others provide this as a service to friends and neighbours.

Sales from private taps are officially against the constitution of UWUA, but it has been tolerated to a certain extent by the management whilst the coverage of the scheme was being extended. Most of those people interviewed saw nothing wrong in the private sale of water, but it remains against the rules of the association.

During interviews, some allegations were made concerning the use of communal labour to dig connections for private taps, and also that those requesting private taps were sometimes asked to pay a bribe in order to secure one. One water user said that they had asked for a private connection over a year before but were still waiting for it to be provided.

Need to 'professionalise'

The management roles of UWUA have been evolving since its inception. The chairman has undoubtedly played a key role since the inception of the scheme, and was re-elected in March 2004. People perceive that his connection to GTZ is vital in continuing to ensure that funds come to the village. As mentioned above, a professional water manager was also employed from 2000 to late 2003. Mr Tesha then moved on to employment with Kiliwater, due to frustrations with the scheme and the low level of remuneration that he received. Following his departure, the chairman was forced to take an increased role in the day-to-day operation. For this role, he began to receive an allowance of 50,000Tsh per month, where previously he had been working as a volunteer.

Employment of professionals is seen as necessary for efficient operation, and in May 2004, a new manager, Mr Danga, was appointed. Mr Danga, who was previously involved with training the UWUA accountant, emphasised that it was necessary to have a professional accountant, as problems were experienced in trying to train a community volunteer. The UWUA board were initially resistant as they felt that an accountant who was part of the community was less likely to cheat them.

An interesting evolution seems to be taking place in Uchira in the need to balance professional management with community participation. Given the partial and contested nature of representation at village level, and the perception that the benefits of the water scheme are mainly being accrued to a small group of 'big potatoes', it is necessary that the roles of all be clarified. This raises questions concerning the differential capacity of 'community' vs. 'professional' management.

Organisational sustainability

Whilst in terms of generating sufficient income to pay its staff, UWUA is sustainable; it still relies on GTZ support for facilitation of community consultation and for advisory support. In addition, if we look at the facilities provided in the UWUA office in relation to the size of community that it serves, it could be argued that the water users are being asked to bear an excessive cost in attempting to maintain a project that is perhaps 'oversized'. The office is well-resourced, and whilst this undoubtedly increases its capacity for professional management, it emphasises the inherent problem with projects of this nature. They are not replicable on a broader scale, and lessons learnt here are, therefore, not necessarily relevant at a higher level, for instance for developing a national or regional water strategy. Those involved in this project are aware of the limitations in this respect but are constrained by the nature of project funding.

Whilst those connected with UWUA have undoubtedly been empowered, this may be at the expense of other villages. UWUA is a powerful organisation in the locality and is now negotiating to acquire the water rights to further springs. On the one hand this could be a strategy to incorporate other communities, and thereby make more efficient use of the existing facilities, but this would then further reduce the possibility that the water supply be community-owned.

Conclusions

This intensive exploration of UWUA tells us several things, all of which have implications for the shape and implementation of water policy in Tanzania and, more broadly, for certain fundamental principles of IWRM.

- 1) Managing water at the local level does not necessarily lead to community ownership. Whilst considerable emphasis was given to community participation and ownership in Uchira through the constitution of the association and the efforts of external consultants, in practice, community ownership is limited to a small group of members.
- 2) Community contribution to the water supply rehabilitation in this case is through payment for water and through communal labour. Communal labour has proved a burden for many and a contentious issue in relation to enforcement. It is doubtful that community ownership is enhanced through communal labour (enforced by village militia and confiscation of property).
- 3) Water pricing at the local level shows an evolution in favour of private taps and therefore, necessarily, the wealthier section of the village. There are no exemptions given at the local level to the most vulnerable, although this is at the discretion of the village council. This issue caused considerable difficulty at the local level and it may be most appropriate for government (or some other external regulatory authority) to set some minimum access criteria for local-level water user entities to fulfil. This may reduce conflict at the local level. As we see in Uchira, whilst people, in principle, are prepared to pay for water, the flat pricing structure places a burden on the poorest, some of whom have to ask for credit. The unstable and vulnerable nature of cash income in the agricultural economy must also be taken into account. As is shown in the public taps survey, average water use in the village is still below the minimum standard detailed in the 2002 water policy. This has implications both for health and productive livelihoods.

- 4) Getting local community institutions right for management requires considerable external and professional support. The day-to-day operations of UWUA are funded through payments for water collected directly at the public taps by water attendants, and by billing owners of private taps. This system is generating a surplus, and allows the association to employ a number of professional staff. However, it remains uncertain whether UWUA can generate sufficient revenue to maintain and develop their scheme. The continued external support from GTZ (capacity-building support) suggests that the association requires a long period of support before it can be fully autonomous. This raises some questions about the viability of village-level water user associations as a wide-scale model for the management of rural water supplies.

References:

- Arce, A. and N. Long, Eds. 2000. *Anthropology, development and modernity: exploring discourses, counter-tendencies and violence*. London, Routledge.
- Beall, J. 2004. *Social policy and urban development. Social Policy for Development*. A. Hall and J. Midgley. London, Sage Publications.
- Bingen, J. 2000. *Institutions and sustainable livelihoods*. Michigan, Michigan University/Livelihoods Connect. <http://www.livelihoods.org>, last accessed 25/11/04.
- Chhotray, V. 2004. The negation of politics in participatory development projects, Kurnool, Andhra Pradesh. *Development and Change* 35(2): pp. 327-52.
- Cleaver, F. 1999. Paradoxes of participation: questioning participatory approaches to development. *Journal of International Development* 11: pp. 597-612.
- Cleaver, F. 2004. From the local to the global: does the micro-level matter in policy making for the Millennium Development Goals? The water consensus: identifying the gaps, ESRC Seminar Series, November 18/19 2004, Bradford, Bradford Centre for International Development.
- Hilhorst, D. 2003. *The real world of NGOs: discourses, diversity and development*. London, Zed Books.
- Hyden, G. 1980. *Beyond ujamaa in Tanzania: underdevelopment and an uncaptured peasantry*. London, Heinemann.
- Kapile, S. 2003. *From statism to liberalism: the dynamics of water supply policies and programmes in Tanzania*, Unpublished MA dissertation, University of Dar-es-Salaam.
- Kyessi, A. G. 2005. Community-based urban water management in fringe neighbourhoods: the case of Dar es Salaam, Tanzania. *Habitat International* 29 (1): pp. 1-27.

- Maganga, F. P., & J. A. Butterworth, 2002. Domestic water supply, competition for water resources and IWRM in Tanzania: a review and discussion paper. *Physics and Chemistry of the Earth* 27: pp. 919-26.
- Ponte, S. 1999. Trading images: discourse and statistical evidence on agricultural adjustment in Tanzania (1986-95). *Agrarian economy, state and society in contemporary Tanzania*. P. G. Forster and S. Maghimbi. Aldershot, Ashgate.
- Rogers, P. and R. de Silva 2002. Water is an economic good: how to use prices to promote equity, efficiency and sustainability. *Water Policy* 4: pp. 1-17.
- Rogers, P and A. Hall 2003. Effective water governance. Stockholm, Elanders Novum.
- Sayer, A. 2000. Realism and social science. London, Sage Publications.
- Sokile, C. S., J. J. Kashaigili, and R.M.J. Kadigi 2003. Towards an integrated water resource management in Tanzania: the role of appropriate institutional framework in Rufiji Basin. *Physics and Chemistry of the Earth* 28: pp. 1015-23.
- Sokile, C. S., H. Mahoo, G.E. van Halsema and L.M. Hermans 2004. Tackling dilemmas for the shared use of water resources: moving towards IWRM in the Mkoji sub-catchment, Tanzania. Water resources management for local development workshop, Aventura, Loskopdam 8-11 November 2004.
- Taylor, A. 1996. Aid: some problems with a modern gift (unpublished BA dissertation). Cambridge, University of Cambridge.
- Tembo, F. 2003. Participation, negotiation and poverty: encountering the power of images: designing pro-poor development programmes. Aldershot, Ashgate.
- Tendler, J. 1997. Good government in the tropics. Baltimore, John Hopkins University.
- Toner, A. 2003. Exploring sustainable livelihoods approaches in relation to two interventions in Tanzania. *Journal of International Development* 15(7): pp. 771-81.
- URT 2002a. National water policy. Dar-es-Salaam, United Republic of Tanzania.
- URT 2002b. Poverty and human development report 2002. Dar-es-Salaam, United Republic of Tanzania/Mkuki ya Nyota Publishers.
- URT 2004. National water sector strategy. Dar-es-Salaam, United Republic of Tanzania Ministry of Water and Livestock.
- Vavrus, F. 2003. Desire and Decline: schooling amid crisis in Tanzania. New York, Peter Lang.
- WaterAid 2004. Social conflict and water: lessons from north-east Tanzania Discussion Paper. London, Water Aid.
- Winpenny, J. T. 1994. Managing water as an economic resource. London, Routledge.